

**FINAL  
Volume IV of VI**



**ECOLOGICAL  
ASSESSMENT  
REPORT,  
FOR OCTOBER, 1995  
ECOLOGICAL  
ASSESSMENT  
OF SOLDIER CREEK  
TINKER AFB  
OKLAHOMA CITY,  
OKLAHOMA  
CONTRACT NO.  
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Prepared for  
Department of the Air Force  
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**APPENDIX J**  
**TOXICITY TESTING RESULTS**

## SOLDIER CREEK SEDIMENT AND SURFACE WATER TOXICITY ASSESSMENT

Acute and chronic toxicity tests were performed in fall 1994, and summer 1995, using fathead minnows (*Pimephales promelas*), water fleas (cladocerans; *Ceriodaphnia dubia*), scuds (amphipods; *Hyalella azteca*), and aquatic worms (*Lumbriculus variegatus*). Fifteen surface-water and sediment samples were tested and compared to results obtained using laboratory control water and sediment.

Surface water toxicity test methods and procedures were in accordance with EPA/600/4-90/027F, *Methods for measuring the acute toxicity of effluents and receiving waters to freshwater and marine organisms* (USEPA 1993), and in accordance with EPA/600/4-89/001, *Short-Term methods for estimating the chronic toxicity of effluents and receiving waters to freshwater organisms* (USEPA 1989).

Sediment toxicity test methods were in accordance with ASTM E-1383-92, *Standard guide for conducting sediment toxicity tests with freshwater invertebrates* (ASTM, 1994), ASTM Draft, *Proposed standard test methods for measuring the toxicity and bioaccumulation of sediment-associated contaminants with freshwater invertebrates* (ASTM, 1994), and ASTM E-1391-90, *New standard guide for collection, storage, characterization, and manipulation of sediments for toxicological testing* (ASTM, 1994).

The acute-toxicity tests provide concentration-response information, with the endpoint expressed as the percent sample concentration that is lethal to 50% of the test organisms (LC<sub>50</sub>) within 48-hours (surface water tests) or 96-hours (bulk sediment tests). The LC<sub>50</sub> was determined by either a point estimation technique (the Trimmed Spearman-Karber method) or by probit regression. A LC<sub>50</sub> cannot be calculated unless at least one exposure concentration results in a mortality rate greater than 50%. For the evaluation presented below, if a LC<sub>50</sub> could not be calculated, the percent mortality observed at the highest exposure concentration tested is presented in the associated tables and discussion.

The results of all chronic-toxicity tests (measurement endpoints of; survival, growth, reproduction) were assessed for independence and normality, and to see if the variances within each of the datasets were homogenous across all exposure concentrations and the control. If these assumptions were met, the results were analyzed using parametric procedures such as Dunnett's Procedure or Bonferroni's T-test. If the data did not meet these

assumptions, a nonparametric procedure such as Steel's Many-One Rank Test or Wilcoxon's Rank Sum Test was used. The endpoint used in evaluating the chronic toxicity tests was the No-Observed-Effect-Concentration (NOEC). The NOEC is the highest concentration to which the organisms were exposed to that did not produce a statistically significant effect on survival, growth and/or reproduction of the test organisms.

## **SURFACE WATER TESTING**

*Ceriodaphnia dubia* used in toxicity testing originated from in-house laboratory cultures. Twenty-four hours prior to the start of the test, all neonates produced in the individual cultures were removed. The morning of testing, neonates produced in the individual cultures were collected to serve as test animals. This procedure insures that the animals collected for use in testing were less than or equal to 24 hours of age. The fathead minnows used in the toxicity test originated from Environmental Consulting and Testing, Superior, Wisconsin, and were less than 24 hours old at test initiation.

## **SURFACE WATER SAMPLING AND HANDLING**

The surface water and sediment samples were grab samples from fifteen sites, ten sites on East Soldier Creek, three sites on West Soldier Creek, and two sites on the reference stream during each of the two sampling events. The samples were delivered to the aquatic toxicology laboratories under chain-of-custody by overnight courier. Acute, 48-hour *C. dubia* and fathead minnow aquatic toxicity tests were begun the day the samples arrived at the laboratory.

## **SAMPLE PREPARATION AND WATER CHEMICAL ANALYSES**

The samples were each diluted to concentrations of 6.25%, 12.5%, 25%, 50% and 100% with laboratory reconstituted water of approximately the same hardness as measured within the samples received. Test vessels used to expose *C. dubia* neonates consisted of 30-mL polystyrene containers each holding 20-mL of solution. Test vessels used for the *P. promelas* larvae consisted of 500-mL polystyrene containers holding 250-mL of solution.

Alkalinity, hardness, and ammonia were measured at the beginning of the test following APHA(1992) procedures. Solution conductivity was measured with a CMS Digital

Conductivity meter; pH, ammonia and temperature were measured with an Orion 720A pH meter with pH electrode, specific ion electrode and temperature probe; dissolved oxygen (D.O.) was measured with a YSI dissolved oxygen meter. Each meter was calibrated in accordance with manufacturer's specifications. The temperature within the environmental chamber was measured continuously with a thermistor and circular chart recorder, as well as a calibrated thermometer immersed in a surrogate test vessel containing dilution water. Exposures were conducted in a temperature and light-controlled environmental chamber. The photoperiod was 16-hours light and 8-hours dark. Temperature was continuously recorded by a circular chart temperature recorder and measured daily with a calibrated thermometer.

## BIOLOGICAL OBSERVATIONS

Observations for mortality, defined as immobility, and behavioral effects were made at 24 and 48 hours of the acute tests, and daily for the seven day chronic tests. The number of dead individuals, if any, were counted and removed from the test container. Daily reproduction counts were made for all chronic *C. dubia* tests. Notations on normal versus abnormal effects were recorded at each observation period. These included observations of swimming activity, appearance, etc.

## TEST INITIATION

The samples were each diluted to concentrations of 6.25%, 12.5%, 25%, 50% and 100% with laboratory reconstituted water of approximately the same hardness as the sample. For the acute *C. dubia* tests, four replicates of the treatment groups and the synthetic control group were prepared with each replicate holding five *C. dubia* neonates. For the chronic *C. dubia* tests, ten replicates of the treatment and the synthetic control group were prepared with each replicate holding one *C. dubia* neonate. Test vessels used for the *C. dubia* neonates consisted of 30-mL polystyrene containers holding 20-mL of solution. The test was considered initiated upon completion of the impartial distribution of *C. dubia* to their test chambers. For the acute tests, impartial distribution was achieved by sequentially adding one to two *C. dubia* per test chamber until all chambers held their complement of five *C. dubia*. The *C. dubia* were randomly assigned to grid locations using a randomization chart.

For the acute fathead minnow tests, two replicates of the treatment groups and the control group were prepared with each replicate holding ten *P. promelas* larvae. For the chronic tests,

four replicates of the treatment and the control group were prepared with each replicate holding ten *P. promelas* larvae. Test vessels used for fathead minnow larvae consisted of 500-mL polycarbonate vessels, each containing 250-mL of test solution or control water. The test was considered initiated upon completion of the impartial distribution of organisms to their test chambers. Impartial distribution was achieved by sequentially adding one to two fathead minnows per test chamber until all chambers held their complement of ten fathead minnows. The fathead minnows were randomly placed to a grid location using a randomization chart.

### **SEDIMENT TOXICITY TEST PROCEDURES**

Toxicity test methods and procedures were in accordance with WCC SOP-E7, "Static and static-renewal toxicity test procedures for determining the toxicity of Soldier Creek sediments to *Hyalella azteca*", and in accordance with WCC SOP-E9, "Static and static-renewal toxicity test procedures for determining the toxicity of Soldier Creek sediments to *Lumbriculus variegatus*". *Hyalella azteca* used in toxicity testing originated from in-house laboratory cultures at WCC's Environmental Toxicology Laboratory in Franklin, TN. The test animals were in their third instar for the acute toxicity test, and in their second instar for the chronic toxicity test. The *Lumbriculus variegatus* used in the toxicity test originated from in-house laboratory cultures at WCC's Environmental Toxicology Laboratory in Franklin, TN.

### **SAMPLE PREPARATION AND OVERLYING WATER CHEMICAL ANALYSES**

The samples were each diluted to concentrations of 6.25%, 12.5%, 25%, 50% and 100% with artificial substrate consisting primarily of ASP-400 silt, coarse sand, fine sand, and aquarium gravel of approximately the same texture of the test sediment. Overlying water was Carter's Creek spring water from Columbia, TN. Test vessels used for the *H. azteca* consisted of 500-mL glass containers holding 100-mL ( $\text{cm}^3$ ) of test sediment sample dilutions or control sediment and filled with spring water. Test vessels used for the *L. variegatus* consisted of 300-mL glass containers holding 100-mL ( $\text{cm}^3$ ) of test sediment sample dilutions or control sediment and filled with spring water. Testing was conducted in a temperature and light-controlled environmental laboratory. Cool-white fluorescent lamps were used with an intensity of 50-100 foot-candles at the surface of the test vessel. The photoperiod was 16-hours light and 8-hours dark. The test temperature was  $23\pm1^\circ\text{C}$ . Temperature was measured daily with a calibrated thermometer.

## TEST INITIATION

Twenty-four hours prior to test initiation, the sediment samples were diluted to concentrations of 6.25%, 12.5%, 25%, 50% and 100% with artificial substrate of approximately the same consistency as the sediment sample. Spring water was carefully decanted into the test vessel so as not to disturb the sediment. The pH, dissolved oxygen, and conductivity of the overlying water was measured prior to the addition of the test animals. Thirty organisms were exposed to each test dilution and control in three replicate test vessels for both the acute and chronic toxicity test.

The test was considered initiated upon completion of the impartial distribution of *H. azteca* to their test chambers. Impartial distribution was achieved by sequentially adding one to two *H. azteca* per test chamber until all chambers held their complement of ten *H. azteca*. The test chambers were randomly assigned to a grid location within the test system using a randomization chart.

The overlying water was renewed eight times daily with a total of 600-3000 mL (two to ten volume replacements) exchanged. The chronic test was fed *Selenastrum capricornutum* and YCT (yeast-cerophyll-trout chow) daily.

For the *L. variegatus* test, forty organisms were exposed to each test dilution and control in four replicate test vessels for the acute toxicity test. The test was considered initiated upon completion of the impartial distribution of *L. variegatus* to their test chambers. Impartial distribution was achieved by sequentially adding one to two *L. variegatus* per test chamber until all chambers held their complement of ten *L. variegatus*. The test chambers were randomly assigned to a grid location within the test system using a randomization chart. The overlying water was renewed eight times daily with a total of 400 mL (two volume replacements) exchanged.

## TEST RESULTS

The results of all of tests performed is provided within this Appendix. The data are organized first by year then by media then by sampling station, then test species and finally by test type (acute followed by chronic). Data produced in 1994 is presented first. Within each year, sediment results are presented first followed by surface water results. Within each sample

media, sediment or water, the data are organized such that the reference stream results are presented first followed by those obtained from the East Soldier Creek stations and finally those results from the West Soldier Creek stations. Within the sediment reports, *Lumbriculus variegatus* results are presented first, followed by the acute toxicity results with *Hyalella azteca* and finally the *H. azteca* chronic toxicity results. The results and conditions for each test are summarized on two pages. The first page summarizes the test conditions, refers to the test organisms, its source, age and response to a reference toxicant (NaCl), the dates for the start and end of the test, dilution sediment and overlying water used in the test. The second page of each test report summarizes the data collected upon arrival at the testing laboratory, the date and time the sample was collected, how it was shipped, the date it was used, and the temperature and other water quality measurements made upon the samples receipt. On the same page is presented a summary of the statistical analysis performed with regards to the method(s) and results followed by table that presents the exposure concentrations, survival at each concentration, pH, specific conductivity, dissolved oxygen, temperature, water hardness, and alkalinity observed during the test.



**TEST SUMMARY: CC-EC01-TX-OO1**  
***Lumbriculus variegatus* Static Acute**

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Test protocol:	WCC SOP E9
Test organism:	<i>Lumbriculus variegatus</i>
Source:	WCC Culture Laboratory
Age of test organism:	Adult
Test initiation:	11/17/94
Test termination:	11/20/94
Temperature:	20 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	300 mL glass beaker
Sediment Test volume:	100 cm <sup>3</sup>
Organisms/replicate:	10
Replicates/concentration:	4
Feeding regime:	none
Aeration during test:	none
Dilution Sediment:	ASTM mix
Test duration:	96 hours
Effect measured:	Mortality

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**TEST RESULTS: CC-EC01-TX-001**  
***Lumbriculus variegatus* 96-Hour Static Acute**

$LC_{50} > 100$

Statistical analysis method: N/A

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )
Control	100.0	8.43	389	6.3 (6.0-6.6)	19.5 (18.8-20.2)	210	280
6.25	97.5	8.44	432	6.8 (6.6-6.9)	22.7 (20.2-25.2)		
12.5	100.0	8.50	397	6.5 (6.2-6.8)	23.1 (20.6-25.6)		
25	100.0	8.51	381	6.5 (6.2-6.8)	22.5 (19.8-25.2)		
50	100.0	8.50	401	6.6 (6.4-6.8)	22.8 (19.0-26.5)		
100	100.0	8.51	368	6.8 (6.6-6.9)	23.8 (20.6-27.0)	320	260

**SEDIMENT SAMPLE ARRIVAL INFORMATION**

<b>Collection Date/Time:</b>	10/28/94 @1000
<b>Use Date/Time:</b>	11/17/94
<b>Method of Shipment:</b>	Overnight Courier
<b>Temperature (°C):</b>	3.0
<b>pH:</b>	8.40
<b>Ammonia (mg/L)</b>	<0.01
<b>Conductivity (umhos/cm):</b>	482
<b>DO (mg/L)</b>	7.0

**TEST SUMMARY: CC-EC01-TX-001**  
***Hyallela azteca* 96 Hour Static Acute**

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Test protocol:	WCC SOP E7
Test organism:	<i>Hyallela azteca</i>
Source:	Woodward-Clyde Consultants
Age of test organism:	Third instar
Test initiation:	11/15/94
Test termination:	11/19/94
Temperature:	25 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	500 mL glass beaker
Sediment Test volume:	100 cm <sup>3</sup>
Organisms/replicate:	10
Replicates/concentration:	3
Feeding regime:	none
Aeration during test:	none
Dilution sediment:	ASTM mix
Test duration:	96 hours
Effect measured:	Mortality

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**TEST RESULTS: CC-EC01-TX-001**  
***Hyallela azteca* 96-Hour Static Acute**

LC<sub>50</sub> > 100%

Statistical analysis method: N/A

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )
Control	97.5	8.26-8.46	650 (490-809)	7.8 (7.6-7.9)	24.1 (22.7-25.5)	220	190
6.25	95.0	8.47-8.49	763 (601-924)	7.8 (7.5-8.0)	23.3 (21.7-24.9)		
12.5	95.0	8.44-8.50	722 (598-845)	7.1 (6.3-7.9)	23.5 (21.7-25.2)		
25	95.0	8.44-8.45	707 (558-856)	7.7 (7.4-7.9)	23.2 (21.6-24.8)		
50	100.0	8.33-8.44	633 (513-753)	7.1 (6.3-7.9)	23.3 (21.6-24.8)		
100	100.0	8.42-8.44	449 (407-491)	7.2 (6.5-7.9)	23.3 (21.6-25.0)	320	260

**SURFACE WATER SAMPLE ARRIVAL INFORMATION**

**Collection Date/Time:** 10/28/94 @ 1000

**Use Date/Time:** 11/15/94

**Method of Shipment:** Overnight Courier

**Temperature (°C):** 3.0

**pH:** 8.40

**Ammonia (mg/L):** <0.01

**Conductivity (umhos/cm):** 452

**DO (mg/L):** 7.0

**TEST SUMMARY: CC-EC01-TX-001**  
***Hyalella azteca* Chronic Sediment**

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Test protocol:	WCC SOP E7
Test organism:	<i>Hyalella azteca</i>
Source:	WCC
Age of test organism:	Second instar
Test initiation:	1/12/94
Test termination:	2/9/95
Temperature:	25 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	500 mL glass beaker
Sediment Test volume:	100 cm <sup>3</sup>
Organisms/replicate:	10
Replicates/concentration:	3
Feeding regime:	YTC/leaf slurry/algae
Aeration during test:	none
Dilution Water:	Spring Water
Test duration:	28 days
Effect measured:	Survival, growth, and reproduction

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**TEST RESULTS : CC- EC01-TX-001**  
***Hyalella azteca* Chronic Survival and Growth Test**

**Survival NOEC:**

Statistical analysis method:	100%
Normality test:	Wilcoxon Rank Sum
Homogeneity of variance test:	Pass

**Growth NOEC:**

Statistical analysis method:	100%
Normality test:	
Homogeneity of variance test:	

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Gravel	90.0	7.58-8.28	573	6.5	23.9
Control	.		(228-917)	(5.0-8.0)	(21.8-26.0)
6.25	70.0	8.01-8.64	492	6.0	23.8
			(314-669)	(4.5-7.4)	(21.2-26.3)
12.5	53.3	8.00-8.66	494	5.9	24.3
			(319-669)	(4.2-7.5)	(22.0-26.5)
25	66.7	8.04-8.67	483	6.0	23.1
			(319-646)	(4.5-7.5)	(21.0-25.2)
50	86.7	8.03-8.60	503	5.8	24.2
			(310-696)	(4.2-7.4)	(22.0-26.3)
100	76.7	8.00-8.56	393	5.9	23.9
			(306-479)	(4.5-7.3)	(21.8-26.0)

**TEST SUMMARY: CC-EC02-TX-OO1**  
***Lumbriculus variegatus* Static Acute**

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Test protocol:	WCC SOP E9
Test organism:	<i>Lumbriculus variegatus</i>
Source:	WCC Culture Laboratory
Age of test organism:	Adult
Test initiation:	11/17/94
Test termination:	11/20/94
Temperature:	20 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	300 mL glass beaker
Sediment Test volume:	100 cm <sup>3</sup>
Organisms/replicate:	10
Replicates/concentration:	4
Feeding regime:	none
Aeration during test:	none
Dilution Sediment:	ASTM mix
Test duration:	96 hours
Effect measured:	Mortality

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**TEST RESULTS: CC-EC02-TX-001**  
***Lumbriculus variegatus* 96-Hour Static Acute**

LC<sub>50</sub>>100%

Statistical analysis method: N/A

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )
Control	100.0	8.43	389	6.3 (6.0-6.6)	19.5 (18.8-20.2)	200	240
6.25	95.0	8.40	379	6.2 (5.8-6.5)	19.5 (18.5-20.5)		
12.5	100.0	8.41	383	6.2 (5.8-6.5)	19.4 (18.8-20.0)		
25	100.0	8.39	391	6.3 (6.0-6.5)	19.6 (19.0-20.2)		
50	100.0	8.42	383	6.5 (6.2-6.7)	19.3 (18.5-20.0)		
100	97.5	8.44	389	6.7 (6.5-6.9)	19.5 (18.8-20.2)	190	200

**SEDIMENT SAMPLE ARRIVAL INFORMATION**

**Collection Date/Time:** 10/28/94 @ 0930

**Use Date/Time:** 11/17/94

**Method of Shipment:** Overnight Courier

**Temperature (°C):** 3.0

**pH:** 8.50

**Ammonia (mg/L):** <0.01

**Conductivity (umhos/cm):** 413

**DO (mg/L):** 7.0

**TEST SUMMARY: CC-EC02-TX-001**  
***Hyallela azteca* 96 Hour Static Acute**

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Test protocol:	WCC SOP E7
Test organism:	<i>Hyallela azteca</i>
Source:	Woodward-Clyde Consultants
Age of test organism:	Third instar
Test initiation:	11/12/94
Test termination:	11/15/94
Temperature:	25 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	500 mL glass beaker
Sediment Test volume:	100 cm <sup>3</sup>
Organisms/replicate:	10
Replicates/concentration:	3
Feeding regime:	none
Aeration during test:	none
Dilution sediment:	ASTM mix
Test duration:	96 hours
Effect measured:	Mortality

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**TEST RESULTS: CC-EC02-TX-001**  
***Hyallela azteca* 96-Hour Static Acute**

LC<sub>50</sub> > 100%  
 Statistical analysis method:N/A

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )
Control	95.0	8.38	741	7.4 (6.8-7.9)	24.3 (23.5-25.0)	200	260
6.25	100.0	8.46	665	7.7 (7.6-7.8)	24.0 (23.5-25.0)		
12.5	97.5	8.51	671	7.7 (7.8-7.8)	24.0 (23.5-25.0)		
25	100.0	8.53	660	7.9 (7.7-8.0)	24.0 (23.5-25.0)		
50	100.0	8.50	596	7.9 (7.8-7.9)	24.5 (23.5-25.5)		
100	95.0	8.43	485	7.9 (7.7-8.0)	24.0 (23.5-24.5)	230	210

**SURFACE WATER SAMPLE ARRIVAL INFORMATION**

**Collection Date/Time:** 10/28/94 @ 0930

**Use Date/Time:** 11/12/94

**Method of Shipment:** Overnight Courier

**Temperature (°C):** 3.0

**pH:** 8.38

**Ammonia (mg/L):** <0.01

**Conductivity (umhos/cm):** 450

**DO (mg/L):** 7.9

**TEST SUMMARY: CC-EC02-TX-001**  
***Hyalella azteca* Chronic Sediment**

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Test protocol:	WCC SOP E7
Test organism:	<i>Hyalella azteca</i>
Source:	WCC
Age of test organism:	second instar
Test initiation:	1/25/95
Test termination:	2/22/95
Temperature:	25 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	500 mL glass beaker
Sediment Test volume:	100 cm <sup>3</sup>
Organisms/replicate:	10
Replicates/concentration:	3
Feeding regime:	YTC/leaf slurry/algae
Aeration during test:	none
Dilution Water:	Spring Water
Test duration:	28 days
Effect measured:	Survival, growth, and reproduction

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**TEST RESULTS : CC- EC02-TX-001**  
***Hyalella azteca* Chronic Survival and Growth Test**

**Survival NOEC:** <6.25%

Statistical analysis method: Dunnett's  
 Normality test: Pass  
 Homogeneity of variance test: Pass

**Growth NOEC:** 100%

Statistical analysis method: Dunnett's  
 Normality test: Pass  
 Homogeneity of variance test: Pass

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Gravel Control	76.7	7.82-8.91	313 (226-400)	6.8 (4.8-8.7)	23.1 (21.2-25.0)
6.25	16.7	8.17-8.97	319 (218-415)	6.5 (4.2-8.7)	22.7 (20.6-24.8)
12.5	20.0	8.12-8.97	310 (212-407)	6.6 (4.2-8.9)	22.6 (20.5-24.6)
25	36.7	8.21-9.01	307 (210-403)	6.8 (4.7-8.9)	22.3 (20.5-24.0)
50	23.3	8.24-8.98	322 (211-433)	6.6 (4.4-8.8)	22.2 (20.3-24.0)
100	26.7	8.29-9.00	305 (209-401)	6.8 (4.7-8.8)	22.7 (20.5-24.8)

**TEST SUMMARY: SC-EE01-TX-OO1**  
***Lumbriculus variegatus* Static Acute**

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Test protocol:	WCC SOP E9
Test organism:	<i>Lumbriculus variegatus</i>
Source:	WCC Culture Laboratory
Age of test organism:	Adult
Test initiation:	11/17/94
Test termination:	11/20/94
Temperature:	20 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	300 mL glass beaker
Sediment Test volume:	100 cm <sup>3</sup>
Organisms/replicate:	10
Replicates/concentration:	4
Feeding regime:	none
Aeration during test:	none
Dilution Sediment:	ASTM mix
Test duration:	96 hours
Effect measured:	Mortality

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**TEST RESULTS: SC-EE01-TX-001**  
***Lumbriculus variegatus* 96-Hour Static Acute**

LC<sub>50</sub>>100%

Statistical analysis method: N/A

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )
Control	100.0	8.41	470	6.6 (5.6-7.5)	19.4 (18.2-20.5)	210	230
6.25	100.0	8.38	417	6.2 (6.0-6.4)	19.5 (18.4-20.5)		
12.5	100.0	8.39	403	6.6 (6.5-6.7)	19.5 (18.8-20.2)		
25	100.0	8.45	403	6.5 (6.3-6.7)	19.4 (18.5-20.2)		
50	100.0	8.47	390	6.8 (6.6-7.0)	19.1 (18.0-20.2)		
100	100.0	8.50	364	6.8 (6.6-6.9)	19.0 (18.2-20.2)	200	250

**SEDIMENT SAMPLE ARRIVAL INFORMATION**

<b>Collection Date/Time:</b>	10/28/94 @1430
<b>Use Date/Time:</b>	11/17/94
<b>Method of Shipment:</b>	Overnight Courier
<b>Temperature (°C):</b>	6.0
<b>pH:</b>	8.52
<b>Ammonia (mg/L):</b>	<0.01
<b>Conductivity (umhos/cm):</b>	395
<b>DO (mg/L):</b>	7.0

**TEST SUMMARY: SC-EE01-TX-001**  
***Hyallela azteca* 96 Hour Static Acute**

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Test protocol: WCC SOP E7

Test organism: *Hyallela azteca*

Source: Woodward-Clyde Consultants

Age of test organism: Third instar

Test initiation: 11/15/94

Test termination: 11/19/94

Temperature: 25 +/- 1 °C

Light: 50 - 100 foot candles

Photoperiod: 16 hours light/8 hours dark

Test vessel: 500 mL glass beaker

Sediment Test volume: 100 cm<sup>3</sup>

Organisms/replicate: 10

Replicates/concentration: 3

Feeding regime: none

Aeration during test: none

Dilution sediment: ASTM mix

Test duration: 96 hours

Effect measured: Mortality

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**TEST RESULTS: SC-EE01-TX-001**  
***Hyallela azteca* 96-Hour Static Acute**

LC<sub>50</sub> > 100%

Statistical analysis method:N/A

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )
Control	97.5	8.26-8.46	650 (490-809)	7.8 (7.6-7.9)	24.1 (22.7-25.5)	220	190
6.25	97.5	8.41-8.43	583 (484-681)	7.6 (7.3-7.9)	23.4 (22.0-24.8)		
12.5	95.0	8.44-8.45	590 (484-695)	7.6 (7.3-7.8)	23.5 (22.0-25.0)		
25	100.0	8.45-8.50	564 (466-661)	7.6 (7.3-7.9)	23.4 (22.0-24.8)		
50	100.0	8.48-8.49	517 (447-587)	7.6 (7.2-8.0)	23.4 (22.0-24.8)		
100	80.0	8.45-8.55	384 (365-415)	7.6 (7.4-7.8)	23.4 (21.8-25.0)	200	200

**SURFACE WATER SAMPLE ARRIVAL INFORMATION**

<b>Collection Date/Time:</b>	10/28/94 @1430
<b>Use Date/Time:</b>	11/15/94
<b>Method of Shipment:</b>	Overnight Courier
<b>Temperature (°C):</b>	6.0
<b>pH:</b>	8.52
<b>Ammonia (mg/L):</b>	<0.01
<b>Conductivity (umhos/cm):</b>	395
<b>DO (mg/L):</b>	7.0

**TEST SUMMARY: SC-EE01-TX-001**  
***Hyalella azteca* Chronic Sediment**

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Test protocol:	WCC SOP E7
Test organism:	<i>Hyalella azteca</i>
Source:	WCC
Age of test organism:	Second instar
Test initiation:	1/12/94
Test termination:	2/9/95
Temperature:	25 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	500 mL glass beaker
Sediment Test volume:	100 cm <sup>3</sup>
Organisms/replicate:	10
Replicates/concentration:	3
Feeding regime:	YTC/leaf slurry/algae
Aeration during test:	none
Dilution Water:	Spring Water
Test duration:	28 days
Effect measured:	Survival, growth, and reproduction

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**TEST RESULTS : SC- EE01-TX-001**  
***Hyalella azteca* Chronic Survival and Growth Test**

**Survival NOEC:** 50%  
 Statistical analysis method: Not Calculable  
 Normality test: Pass  
 Homogeneity of variance test: Fail

**Growth NOEC:** 100%  
 Statistical analysis method:  
 Normality test:  
 Homogeneity of variance test:

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Gravel	90.0	7.58-8.28	573	6.5	23.9
Control			(228-917)	(5.0-8.0)	(21.8-26.0)
6.25	56.7	7.96-8.70	509 (312-706)	6.2 (4.8-7.6)	24.0 (21.8-26.2)
12.5	53.3	7.99-8.70	476 (306-646)	6.0 (4.5-7.5)	23.9 (21.8-26.0)
25	63.3	8.00-8.67	526 (307-745)	6.1 (4.6-7.4)	23.2 (20.8-25.5)
50	86.7	8.01-8.66	493 (294-692)	5.9 (7.4-4.3)	24.1 (21.6-26.5)
100	30.0	8.00-8.73	364 (304-424)	5.9 (4.3-7.4)	23.6 (21.2-26.0)

**TEST SUMMARY: SC-EE01-TX-OO1**  
***Lumbriculus variegatus* Static Acute**

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Test protocol:	WCC SOP E9
Test organism:	<i>Lumbriculus variegatus</i>
Source:	WCC Culture Laboratory
Age of test organism:	Adult
Test initiation:	11/17/94
Test termination:	11/20/94
Temperature:	20 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	300 mL glass beaker
Sediment Test volume:	100 cm <sup>3</sup>
Organisms/replicate:	10
Replicates/concentration:	4
Feeding regime:	none
Aeration during test:	none
Dilution Sediment:	ASTM mix
Test duration:	96 hours
Effect measured:	Mortality

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**TEST RESULTS: SC-EE01-TX-001**  
***Lumbriculus variegatus* 96-Hour Static Acute**

$LC_{50} > 100\%$

Statistical analysis method: N/A

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )
Control	100.0	8.41	470	6.6 (5.6-7.5)	19.4 (18.2-20.5)	210	230
6.25	100.0	8.38	417	6.2 (6.0-6.4)	19.5 (18.4-20.5)		
12.5	100.0	8.39	403	6.6 (6.5-6.7)	19.5 (18.8-20.2)		
25	100.0	8.45	403	6.5 (6.3-6.7)	19.4 (18.5-20.2)		
50	100.0	8.47	390	6.8 (6.6-7.0)	19.1 (18.0-20.2)		
100	100.0	8.50	364	6.8 (6.6-6.9)	19.0 (18.2-20.2)	200	250

**SEDIMENT SAMPLE ARRIVAL INFORMATION**

<b>Collection Date/Time:</b>	10/28/94 @1430
<b>Use Date/Time:</b>	11/17/94
<b>Method of Shipment:</b>	Overnight Courier
<b>Temperature (°C):</b>	6.0
<b>pH:</b>	8.52
<b>Ammonia (mg/L):</b>	<0.01
<b>Conductivity (umhos/cm):</b>	395
<b>DO (mg/L):</b>	7.0

**TEST SUMMARY: SC-EE01-TX-001**  
***Hyallela azteca* 96 Hour Static Acute**

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Test protocol:	WCC SOP E7
Test organism:	<i>Hyallela azteca</i>
Source:	Woodward-Clyde Consultants
Age of test organism:	Third instar
Test initiation:	11/15/94
Test termination:	11/19/94
Temperature:	25 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	500 mL glass beaker
Sediment Test volume:	100 cm <sup>3</sup>
Organisms/replicate:	10
Replicates/concentration:	3
Feeding regime:	none
Aeration during test:	none
Dilution sediment:	ASTM mix
Test duration:	96 hours
Effect measured:	Mortality

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**TEST RESULTS: SC-EE01-TX-001**  
***Hyallela azteca* 96-Hour Static Acute**

LC<sub>50</sub> > 100%

Statistical analysis method:N/A

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )
Control	97.5	8.26-8.46	650 (490-809)	7.8 (7.6-7.9)	24.1 (22.7-25.5)	220	190
6.25	97.5	8.41-8.43	583 (484-681)	7.6 (7.3-7.9)	23.4 (22.0-24.8)		
12.5	95.0	8.44-8.45	590 (484-695)	7.6 (7.3-7.8)	23.5 (22.0-25.0)		
25	100.0	8.45-8.50	564 (466-661)	7.6 (7.3-7.9)	23.4 (22.0-24.8)		
50	100.0	8.48-8.49	517 (447-587)	7.6 (7.2-8.0)	23.4 (22.0-24.8)		
100	80.0	8.45-8.55	384 (365-415)	7.6 (7.4-7.8)	23.4 (21.8-25.0)	200	200

**SURFACE WATER SAMPLE ARRIVAL INFORMATION**

<b>Collection Date/Time:</b>	10/28/94 @1430
<b>Use Date/Time:</b>	11/15/94
<b>Method of Shipment:</b>	Overnight Courier
<b>Temperature (°C):</b>	6.0
<b>pH:</b>	8.52
<b>Ammonia (mg/L):</b>	<0.01
<b>Conductivity (umhos/cm):</b>	395
<b>DO (mg/L):</b>	7.0

**TEST SUMMARY: SC-EE01-TX-001**  
***Hyalella azteca* Chronic Sediment**

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Test protocol:	WCC SOP E7
Test organism:	<i>Hyalella azteca</i>
Source:	WCC
Age of test organism:	Second instar
Test initiation:	1/12/94
Test termination:	2/9/95
Temperature:	25 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	500 mL glass beaker
Sediment Test volume:	100 cm <sup>3</sup>
Organisms/replicate:	10
Replicates/concentration:	3
Feeding regime:	YTC/leaf slurry/algae
Aeration during test:	none
Dilution Water:	Spring Water
Test duration:	28 days
Effect measured:	Survival, growth, and reproduction

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**TEST RESULTS : SC- EE01-TX-001**  
***Hyalella azteca* Chronic Survival and Growth Test**

**Survival NOEC:** 50%  
 Statistical analysis method: Not Calculable  
 Normality test: Pass  
 Homogeneity of variance test: Fail

**Growth NOEC:** 100%  
 Statistical analysis method:  
 Normality test:  
 Homogeneity of variance test:

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Gravel Control	90.0	7.58-8.28	573 (228-917)	6.5 (5.0-8.0)	23.9 (21.8-26.0)
6.25	56.7	7.96-8.70	509 (312-706)	6.2 (4.8-7.6)	24.0 (21.8-26.2)
12.5	53.3	7.99-8.70	476 (306-646)	6.0 (4.5-7.5)	23.9 (21.8-26.0)
25	63.3	8.00-8.67	526 (307-745)	6.1 (4.6-7.4)	23.2 (20.8-25.5)
50	86.7	8.01-8.66	493 (294-692)	5.9 (7.4-4.3)	24.1 (21.6-26.5)
100	30.0	8.00-8.73	364 (304-424)	5.9 (4.3-7.4)	23.6 (21.2-26.0)

**TEST SUMMARY: SC-EE02-TX-OO1**  
***Lumbriculus variegatus* Static Acute**

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Test protocol:	WCC SOP E9
Test organism:	<i>Lumbriculus variegatus</i>
Source:	WCC Culture Laboratory
Age of test organism:	Adult
Test initiation:	11/15/94
Test termination:	11/18/94
Temperature:	20 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	300 mL glass beaker
Sediment Test volume:	100 cm <sup>3</sup>
Organisms/replicate:	10
Replicates/concentration:	4
Feeding regime:	none
Aeration during test:	none
Dilution Sediment:	ASTM mix
Test duration:	96 hours
Effect measured:	Mortality

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**TEST RESULTS: SC-EE02-TX-001**  
***Lumbriculus variegatus* 96-Hour Static Acute**

LC<sub>50</sub>>100%

Statistical analysis method: N/A

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )
Control	100.0	8.40	389	5.6 (4.8-6.9)	20.5 (20.0-21.0)	210	320
6.25	100.0	8.45	388	6.6 (6.4-6.7)	20.4 (19.8-21.0)		
12.5	100.0	8.46	384	6.4 (6.0-6.8)	20.9 (20.0-21.8)		
25	100.0	8.44	429	6.6 (6.3-6.9)	20.0 (19.2-21.2)		
50	100.0	8.49	374	6.5 (6.0-6.9)	20.6 (19.8-21.4)		
100	100.0	8.54	368	6.8 (6.4-7.1)	20.3 (19.5-21.0)	200	190

**SEDIMENT SAMPLE ARRIVAL INFORMATION**

<b>Collection Date/Time:</b>	10/27/94 @1430
<b>Use Date/Time:</b>	11/15/94
<b>Method of Shipment:</b>	Overnight Courier
<b>Temperature (°C):</b>	2.5
<b>pH:</b>	8.53
<b>Ammonia (mg/L)</b>	<0.01
<b>Conductivity (umhos/cm):</b>	401
<b>DO (mg/L)</b>	6.9

**TEST SUMMARY: SC-EE02-TX-001**  
***Hyallela azteca* 96 Hour Static Acute**

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Test protocol:	WCC SOP E7
Test organism:	<i>Hyallela azteca</i>
Source:	Woodward-Clyde Consultants
Age of test organism:	Third instar
Test initiation:	11/14/94
Test termination:	11/18/94
Temperature:	25 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	500 mL glass beaker
Sediment Test volume:	100 cm <sup>3</sup>
Organisms/replicate:	10
Replicates/concentration:	3
Feeding regime:	none
Aeration during test:	none
Dilution sediment:	ASTM mix
Test duration:	96 hours
Effect measured:	Mortality

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**TEST RESULTS: SC-EE02-TX-001**  
***Hyalella azteca* 96-Hour Static Acute**

LC<sub>50</sub> > 100%  
 Statistical analysis method: N/A

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )
Control	100.0	8.51	855	7.7 (7.5-7.9)	24.6 (24.2-25.0)		
6.25	95.0	8.50	770	7.7 (7.5-7.9)	24.7 (24.5-24.8)		
12.5	100.0	8.52	831	7.8 (7.7-7.9)	25.0 (24.5-25.5)		
25	100.0	8.54	682	7.9 (7.8-7.9)	24.8 (24.2-25.3)		
50	100.0	8.52	658	7.8 (7.7-7.9)	24.9 (24.2-25.5)		
100	65.0	8.53	477	7.1 (6.3-7.9)	24.7 (24.5-24.9)		

**SURFACE WATER SAMPLE ARRIVAL INFORMATION**

**Collection Date/Time:** 10/27/94 @1430

**Use Date/Time:** 11/14/94

**Method of Shipment:** Overnight Courier

**Temperature (°C):** 2.5

**pH:** 8.49

**Ammonia (mg/L):** <0.01

**Conductivity (umhos/cm):** 391

**DO (mg/L):** 7.1

**TEST SUMMARY: SC-EE02-TX-001**  
***Hyalella azteca* Chronic Sediment**

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Test protocol:	WCC SOP E7
Test organism:	<i>Hyalella azteca</i>
Source:	WCC
Age of test organism:	Second instar
Test initiation:	1/12/94
Test termination:	2/9/95
Temperature:	25 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	500 mL glass beaker
Sediment Test volume:	100 cm <sup>3</sup>
Organisms/replicate:	10
Replicates/concentration:	3
Feeding regime:	YTC/leaf slurry/algae
Aeration during test:	none
Dilution Water:	Spring Water
Test duration:	28 days
Effect measured:	Survival, growth, and reproduction

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**TEST RESULTS : SC- EE02-TX-001**  
***Hyalella azteca* Chronic Survival and Growth Test**

**Survival NOEC:** 25%  
 Statistical analysis method: Dunnett's  
 Normality test: Pass  
 Homogeneity of variance test: Fail  
**Growth NOEC:** 100%  
 Statistical analysis method:  
 Normality test:  
 Homogeneity of variance test:

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Gravel	90.0	7.58-8.28	573	6.5	23.9
Control			(228-917)	(5.0-8.0)	(21.8-26.0)
6.25	66.7	7.97-8.67	458 (300-616)	6.5 (5.2-7.7)	24.0 (21.4-26.5)
12.5	70.0	8.00-8.68	433 (310-566)	6.4 (4.9-7.8)	24.2 (21.8-26.5)
25	70.0	7.99-8.68	436 (305-567)	6.2 (4.6-7.8)	23.9 (21.6-26.0)
50	53.3	7.98-8.68	445 (310-580)	6.3 (4.8-7.8)	24.2 (21.8-26.5)
100	36.7	7.99-8.68	369 (305-432)	6.4 (4.8-7.9)	24.2 (21.8-26.5)

**TEST SUMMARY: SC-EE03-TX-OO1**  
***Lumbriculus variegatus* Static Acute**

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Test protocol:	WCC SOP E9
Test organism:	<i>Lumbriculus variegatus</i>
Source:	WCC Culture Laboratory
Age of test organism:	Adult
Test initiation:	11/15/94
Test termination:	11/18/94
Temperature:	20 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	300 mL glass beaker
Sediment Test volume:	100 cm <sup>3</sup>
Organisms/replicate:	10
Replicates/concentration:	4
Feeding regime:	none
Aeration during test:	none
Dilution Sediment:	ASTM mix
Test duration:	96 hours
Effect measured:	Mortality

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**TEST RESULTS: SC-EE03-TX-001**  
***Lumbriculus variegatus* 96-Hour Static Acute**

LC<sub>50</sub>>100%

Statistical analysis method: N/A

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )
Control	100.0	8.40	389	5.6 (4.8-6.9)	20.5 (20.0-21.0)	210	320
6.25	100.0	8.47	386	6.5 (5.9-7.1)	20.2 (19.4-21.0)		
12.5	100.0	8.47	392	6.6 (6.2-7.0)	20.6 (20.0-21.2)		
25	100.0	8.50	391	6.6 (6.2-6.9)	20.5 (19.5-21.4)		
50	100.0	8.42	461	6.6 (6.2-6.9)	20.5 (20.0-21.0)		
100	97.5	8.54	377	6.9 (6.4-7.3)	20.4 (19.8-21.0)	330	250

**SEDIMENT SAMPLE ARRIVAL INFORMATION**

<b>Collection Date/Time:</b>	10/27/94 @1230
<b>Use Date/Time:</b>	11/15/94
<b>Method of Shipment:</b>	Overnight Courier
<b>Temperature (°C):</b>	3.5
<b>pH:</b>	8.50
<b>Ammonia (mg/L):</b>	<0.01
<b>Conductivity (umhos/cm):</b>	408
<b>DO (mg/L):</b>	7.2

**TEST SUMMARY: SC-EE03-TX-201**  
***Hyallela azteca* 96 Hour Static Acute**

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Test protocol:	WCC SOP E7
Test organism:	<i>Hyallela azteca</i>
Source:	Woodward-Clyde Consultants
Age of test organism:	Third instar
Test initiation:	11/15/94
Test termination:	11/18/94
Temperature:	25 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	500 mL glass beaker
Sediment Test volume:	100 cm <sup>3</sup>
Organisms/replicate:	10
Replicates/concentration:	3
Feeding regime:	none
Aeration during test:	none
Dilution sediment:	ASTM mix
Test duration:	96 hours
Effect measured:	Mortality

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**TEST RESULTS: SC-EE03-TX-201**  
***Hyallela azteca* 96-Hour Static Acute**

LC<sub>50</sub> > 100%

Statistical analysis method: N/A

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )
Control	100.0	8.51	855	7.7 (7.5-7.9)	24.6 (24.2-25.0)	200	260
6.25	100.0	8.57	729	7.2 (6.5-7.9)	24.8 (24.5-25.0)		
12.5	100.0	8.53	745	8.0 (7.9-8.0)	24.8 (24.5-25.0)		
25	100.0	8.32	722	7.0 (6.1-7.9)	24.8 (24.5-25.0)		
50	100.0	8.31	678	7.1 (6.2-7.9)	24.7 (24.5-24.8)		
100	90.0	8.51	465	7.9 (7.8-8.0)	24.4 (24.2-24.5)	200	220

**SURFACE WATER SAMPLE ARRIVAL INFORMATION**

**Collection Date/Time:** 10/27/94 @1230

**Use Date/Time:** 11/15/94

**Method of Shipment:** Overnight Courier

**Temperature (°C):** 3.5

**pH:** 8.53

**Ammonia (mg/L):** <0.01

**Conductivity (umhos/cm):** 381

**DO (mg/L):** 7.2

**TEST SUMMARY: SC-EE03-TX-001**  
***Hyalella azteca* Chronic Sediment**

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Test protocol:	WCC SOP E7
Test organism:	<i>Hyalella azteca</i>
Source:	WCC
Age of test organism:	Second instar
Test initiation:	1/12/94
Test termination:	2/9/95
Temperature:	25 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	500 mL glass beaker
Sediment Test volume:	100 cm <sup>3</sup>
Organisms/replicate:	10
Replicates/concentration:	3
Feeding regime:	YTC/leaf slurry/algae
Aeration during test:	none
Dilution Water:	Spring Water
Test duration:	28 days
Effect measured:	Survival, growth, and reproduction

---

**TEST RESULTS : SC- EE03-TX-001**  
***Hyalella azteca* Chronic Survival and Growth Test**

**Survival NOEC:** 12.5%  
 Statistical analysis method: Dunnett's  
 Normality test: Pass  
 Homogeneity of variance test: Fail  
**Growth NOEC:** 100%  
 Statistical analysis method:  
 Normality test:  
 Homogeneity of variance test:

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Gravel	90.0	7.58-8.28	573	6.5	23.9
Control			(228-917)	(5.0-8.0)	(21.8-26.0)
6.25	70.0	7.99-8.72	438	6.3	23.5
			(300-576)	(54.4-7.9)	(21.0-26.0)
12.5	73.3	8.00-8.71	439	6.3	23.7
			(305-572)	(4.7-7.9)	(21.4-26.0)
25	30.0	8.02-8.73	445	6.1	23.7
			(308-581)	(4.4-7.8)	(21.4-26.0)
50	86.7	8.02-8.72	436	6.0	23.4
			(304-567)	(4.2-7.8)	(20.8-26.0)
100	46.7	8.01-8.71	469	6.2	24.1
			(305-633)	(4.6-7.8)	(21.8-26.3)

**TEST SUMMARY: SC-EE03-TX-OO1**  
***Lumbriculus variegatus* Static Acute**

---

Test protocol:	WCC SOP E9
Test organism:	<i>Lumbriculus variegatus</i>
Source:	WCC Culture Laboratory
Age of test organism:	Adult
Test initiation:	11/15/94
Test termination:	11/18/94
Temperature:	20 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	300 mL glass beaker
Sediment Test volume:	100 cm <sup>3</sup>
Organisms/replicate:	10
Replicates/concentration:	4
Feeding regime:	none
Aeration during test:	none
Dilution Sediment:	ASTM mix
Test duration:	96 hours
Effect measured:	Mortality

---

**TEST RESULTS: SC-EE03-TX-001**  
***Lumbriculus variegatus* 96-Hour Static Acute**

LC<sub>50</sub> >100%  
 Statistical analysis method: N/A

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )
Control	100.0	8.40	389	5.6 (4.8-6.9)	20.5 (20.0-21.0)	210	320
6.25	100.0	8.47	386	6.5 (5.9-7.1)	20.2 (19.4-21.0)		
12.5	100.0	8.47	392	6.6 (6.2-7.0)	20.6 (20.0-21.2)		
25	100.0	8.50	391	6.6 (6.2-6.9)	20.5 (19.5-21.4)		
50	100.0	8.42	461	6.6 (6.2-6.9)	20.5 (20.0-21.0)		
100	97.5	8.54	377	6.9 (6.4-7.3)	20.4 (19.8-21.0)	330	250

**SEDIMENT SAMPLE ARRIVAL INFORMATION**

<b>Collection Date/Time:</b>	10/27/94 @1230
<b>Use Date/Time:</b>	11/15/94
<b>Method of Shipment:</b>	Overnight Courier
<b>Temperature (°C):</b>	3.5
<b>pH:</b>	8.50
<b>Ammonia (mg/L)</b>	<0.01
<b>Conductivity (umhos/cm):</b>	408
<b>DO (mg/L)</b>	7.2

**TEST SUMMARY: SC-EE03-TX-201**  
***Hyallela azteca* 96 Hour Static Acute**

---

Test protocol:	WCC SOP E7
Test organism:	<i>Hyallela azteca</i>
Source:	Woodward-Clyde Consultants
Age of test organism:	Third instar
Test initiation:	11/15/94
Test termination:	11/18/94
Temperature:	25 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	500 mL glass beaker
Sediment Test volume:	100 cm <sup>3</sup>
Organisms/replicate:	10
Replicates/concentration:	3
Feeding regime:	none
Aeration during test:	none
Dilution sediment:	ASTM mix
Test duration:	96 hours
Effect measured:	Mortality

---

**TEST RESULTS: SC-EE03-TX-201**  
***Hyallela azteca* 96-Hour Static Acute**

LC<sub>50</sub> > 100%  
 Statistical analysis method: N/A

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )
Control	100.0	8.51	855	7.7 (7.5-7.9)	24.6 (24.2-25.0)	200	260
6.25	100.0	8.57	729	7.2 (6.5-7.9)	24.8 (24.5-25.0)		
12.5	100.0	8.53	745	8.0 (7.9-8.0)	24.8 (24.5-25.0)		
25	100.0	8.32	722	7.0 (6.1-7.9)	24.8 (24.5-25.0)		
50	100.0	8.31	678	7.1 (6.2-7.9)	24.7 (24.5-24.8)		
100	90.0	8.51	465	7.9 (7.8-8.0)	24.4 (24.2-24.5)	200	220

**SURFACE WATER SAMPLE ARRIVAL INFORMATION**

**Collection Date/Time:** 10/27/94 @1230

**Use Date/Time:** 11/15/94

**Method of Shipment:** Overnight Courier

**Temperature (°C):** 3.5

**pH:** 8.53

**Ammonia (mg/L):** <0.01

**Conductivity (umhos/cm):** 381

**DO (mg/L):** 7.2

**TEST SUMMARY: SC-EE03-TX-001**  
***Hyalella azteca* Chronic Sediment**

---

Test protocol:	WCC SOP E7
Test organism:	<i>Hyalella azteca</i>
Source:	WCC
Age of test organism:	Second instar
Test initiation:	1/12/94
Test termination:	2/9/95
Temperature:	25 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	500 mL glass beaker
Sediment Test volume:	100 cm <sup>3</sup>
Organisms/replicate:	10
Replicates/concentration:	3
Feeding regime:	YTC/leaf slurry/algae
Aeration during test:	none
Dilution Water:	Spring Water
Test duration:	28 days
Effect measured:	Survival, growth, and reproduction

---

**TEST RESULTS : SC- EE03-TX-001**  
***Hyalella azteca* Chronic Survival and Growth Test**

**Survival NOEC:** 12.5%  
 Statistical analysis method: Dunnett's  
 Normality test: Pass  
 Homogeneity of variance test: Fail  
**Growth NOEC:** 100%  
 Statistical analysis method:  
 Normality test:  
 Homogeneity of variance test:

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Gravel	90.0	7.58-8.28	573	6.5	23.9
Control			(228-917)	(5.0-8.0)	(21.8-26.0)
6.25	70.0	7.99-8.72	438	6.3	23.5
			(300-576)	(54.4-7.9)	(21.0-26.0)
12.5	73.3	8.00-8.71	439	6.3	23.7
			(305-572)	(4.7-7.9)	(21.4-26.0)
25	30.0	8.02-8.73	445	6.1	23.7
			(308-581)	(4.4-7.8)	(21.4-26.0)
50	86.7	8.02-8.72	436	6.0	23.4
			(304-567)	(4.2-7.8)	(20.8-26.0)
100	46.7	8.01-8.71	469	6.2	24.1
			(305-633)	(4.6-7.8)	(21.8-26.3)

**TEST SUMMARY: SC-EE04-TX-OO1**  
***Lumbriculus variegatus* Static Acute**

---

Test protocol:	WCC SOP E9
Test organism:	<i>Lumbriculus variegatus</i>
Source:	WCC Culture Laboratory
Age of test organism:	Adult
Test initiation:	11/15/94
Test termination:	11/18/94
Temperature:	20 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	300 mL glass beaker
Sediment Test volume:	100 cm <sup>3</sup>
Organisms/replicate:	10
Replicates/concentration:	4
Feeding regime:	none
Aeration during test:	none
Dilution Sediment:	ASTM mix
Test duration:	96 hours
Effect measured:	Mortality

---

**TEST RESULTS: SC-EE04-TX-001**  
***Lumbriculus variegatus* 96-Hour Static Acute**

LC<sub>50</sub> > 100%  
 Statistical analysis method:N/A

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )
Control	100.0	8.40	389	5.6 (4.8-6.9)	20.5 (20.0-21.0)	230	240
6.25	100.0	8.24	381	6.1 (5.5-6.7)	20.6 (20.1-21.0)		
12.5	100.0	8.28	377	6.0 (5.0-7.0)	20.4 (19.8-21.0)		
25	100.0	8.29	381	5.9 (5.3-6.4)	20.5 (19.8-21.1)		
50	100.0	8.22	411	6.0 (5.2-6.7)	20.3 (19.8-20.8)		
100	100.0	8.42	373	6.1 (5.7-6.5)	20.5 (19.8-21.2)	220	260

**SEDIMENT SAMPLE ARRIVAL INFORMATION**

<b>Collection Date/Time:</b>	10/27/94 @ 1030
<b>Use Date/Time:</b>	11/15/94
<b>Method of Shipment:</b>	Overnight Courier
<b>Temperature (°C):</b>	4.0
<b>pH:</b>	8.23
<b>Ammonia (mg/L):</b>	<0.01
<b>Conductivity (umhos/cm):</b>	436
<b>DO (mg/L):</b>	5.4

**TEST SUMMARY: SC-EE04-TX-001**  
***Hyallela azteca* 96 Hour Static Acute**

---

Test protocol:	WCC SOP E7
Test organism:	<i>Hyallela azteca</i>
Source:	Woodward-Clyde Consultants
Age of test organism:	Third instar
Test initiation:	11/12/94
Test termination:	11/15/94
Temperature:	25 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	500 mL glass beaker
Sediment Test volume:	100 cm <sup>3</sup>
Organisms/replicate:	10
Replicates/concentration:	3
Feeding regime:	none
Aeration during test:	none
Dilution sediment:	ASTM mix
Test duration:	96 hours
Effect measured:	Mortality

---

**TEST RESULTS: SC-EE04-TX-001**  
***Hyallela azteca* 96-Hour Static Acute**

LC<sub>50</sub> > 100%  
 Statistical analysis method:N/A

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )
Control	95.0	8.38	741	7.4 (6.8-7.9)	24.3 (23.5-25.0)	220	210
6.25	97.5	8.47	687	7.3 (6.9-7.7)	24.3 (23.5-25.0)		
12.5	97.5	8.45	673	7.6 (7.5-7.7)	24.3 (23.6-25.0)		
25	90.0	8.47	655	7.6 (7.5-7.7)	24.3 (23.5-25.0)		
50	95.0	8.53	592	7.7 (7.5-7.8)	24.3 (23.5-25.0)		
100	95.0	8.53	511	7.6 (7.5-7.7)	24.3 (23.5-25.0)	220	240

**SURFACE WATER SAMPLE ARRIVAL INFORMATION**

**Collection Date/Time:** 10/27/94 @1030

**Use Date/Time:** 11/12/94

**Method of Shipment:** Overnight Courier

**Temperature (°C):** 4.0

**pH:** 8.12

**Ammonia (mg/L):** <0.01

**Conductivity (umhos/cm):** 426

**DO (mg/L):** 5.3

**TEST SUMMARY: SC-EE04-TX-001**  
***Hualella azteca* Chronic Sediment**

---

Test protocol:	WCC SOP E7
Test organism:	<i>Hualella azteca</i>
Source:	WCC
Age of test organism:	Second instar
Test initiation:	1/25/95
Test termination:	2/22/95
Temperature:	25 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	500 mL glass beaker
Sediment Test volume:	100 cm <sup>3</sup>
Organisms/replicate:	10
Replicates/concentration:	3
Feeding regime:	YTC/leaf slurry/algae
Aeration during test:	none
Dilution Water:	Spring Water
Test duration:	28 days
Effect measured:	Survival, growth, and reproduction

---

**TEST RESULTS : SC- EE04-TX-001**  
***Hyalella azteca* Chronic Survival and Growth Test**

**Survival NOEC:** <6.25%

Statistical analysis method:

Normality test:

Homogeneity of variance test:

**Growth NOEC:** <6.25%

Statistical analysis method:

Normality test:

Homogeneity of variance test:

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Gravel	76.7	7.82-8.91	313	6.8	23.1
Control 6.25	0.0	8.16-8.86	(226-400) 321 (217-424)	(4.8-8.7) 6.2 (3.8-8.5)	(21.2-25.0) 22.5 (20.4-24.6)
12.5	0.0	8.18-9.01	322 (214-430)	6.4 (4.0-8.8)	22.5 (20.4-24.6)
25	0.0	8.18-8.99	320 (217-422)	6.5 (4.2-8.8)	23.1 (20.2-24.0)
50	0.0	8.24-9.18	322 (221-423)	5.8 (30.-8.6)	22.7 (20.5-24.8)
100	0.0	8.30-9.17	292 (224-360)	5.8 (2.8-8.7)	22.4 (20.7-24.0)

**TEST SUMMARY: SC-EE05-TX-OO1**  
***Lumbriculus variegatus* Static Acute**

---

Test protocol:	WCC SOP E9
Test organism:	<i>Lumbriculus variegatus</i>
Source:	WCC Culture Laboratory
Age of test organism:	Adult
Test initiation:	11/15/94
Test termination:	11/18/94
Temperature:	20 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	300 mL glass beaker
Sediment Test volume:	100 cm <sup>3</sup>
Organisms/replicate:	10
Replicates/concentration:	4
Feeding regime:	none
Aeration during test:	none
Dilution Sediment:	ASTM mix
Test duration:	96 hours
Effect measured:	Mortality

---

**TEST RESULTS: SC-EE05-TX-001**  
***Lumbriculus variegatus* 96-Hour Static Acute**

$LC_{50} > 100\%$

Statistical analysis method: N/A

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )
Control	100.0	8.14	372	6.0 (5.2-6.8)	20.5 (20.0-21.0)	200	270
6.25	100.0	8.40	383	6.5 (5.8-7.1)	20.4 (19.8-21.0)		
12.5	100.0	8.41	383	6.5 (5.3-6.7)	20.5 (20.0-21.0)		
25	100.0	8.42	373	6.5 (5.9-7.0)	20.5 (20.0-21.0)		
50	100.0	8.41	390	6.7 (6.2-7.2)	20.4 (19.8-21.0)		
100	100.0	8.49	360	6.8 (6.4-7.2)	20.5 (20.0-21.0)	200	220

**SEDIMENT SAMPLE ARRIVAL INFORMATION**

<b>Collection Date/Time:</b>	10/27/94 @0930
<b>Use Date/Time:</b>	11/15/94
<b>Method of Shipment:</b>	Overnight Courier
<b>Temperature (°C):</b>	1.0
<b>pH:</b>	8.37
<b>Ammonia (mg/L)</b>	<0.01
<b>Conductivity (umhos/cm):</b>	368
<b>DO (mg/L)</b>	6.7

**TEST SUMMARY: SC-EE05-TX-001**  
***Hyallela azteca* 96 Hour Static Acute**

---

Test protocol:	WCC SOP E7
Test organism:	<i>Hyallela azteca</i>
Source:	Woodward-Clyde Consultants
Age of test organism:	Third instar
Test initiation:	11/15/94
Test termination:	11/19/94
Temperature:	25 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	500 mL glass beaker
Sediment Test volume:	100 cm <sup>3</sup>
Organisms/replicate:	10
Replicates/concentration:	3
Feeding regime:	none
Aeration during test:	none
Dilution sediment:	ASTM mix
Test duration:	96 hours
Effect measured:	Mortality

---

**TEST RESULTS: SC-EE05-TX-001**  
***Hyallela azteca* 96-Hour Static Acute**

LC<sub>50</sub> > 100%  
 Statistical analysis method: N/A

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )
Control	97.5	8.26-8.46	650 (490-809)	7.8 (7.6-7.9)	24.1 (22.7-25.5)	220	190
6.25	97.5	8.42-8.48	597 (476-718)	7.7 (7.5-7.9)	23.8 (22.7-24.8)		
12.5	100.0	8.41-8.45	607 (485-728)	7.6 (7.4-7.8)	23.6 (22.5-25.2)		
25	97.5	8.41-8.47	523 (451-595)	7.7 (7.3-8.1)	23.5 (22.5-24.8)		
50	95.0	8.42-8.45	518 (446-590)	7.6 (7.3-7.9)	23.8 (22.3-25.2)		
100	95.0	8.38-8.41	379 (362-395)	7.7 (7.4-7.9)	23.7 (22.3-25.0)	200	190

**SURFACE WATER SAMPLE ARRIVAL INFORMATION**

**Collection Date/Time:** 10/27/94 @0930

**Use Date/Time:** 11/15/94

**Method of Shipment:** Overnight Courier

**Temperature (°C):** 1.0

**pH:** 8.37

**Ammonia (mg/L):** <0.01

**Conductivity (umhos/cm):** 368

**DO (mg/L):** 6.7

**TEST SUMMARY: SC-EE05-TX-001**  
***Hyalella azteca* Chronic Sediment**

---

Test protocol:	WCC SOP E7
Test organism:	<i>Hyalella azteca</i>
Source:	WCC
Age of test organism:	Second instar
Test initiation:	1/25/95
Test termination:	2/22/95
Temperature:	25 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	500 mL glass beaker
Sediment Test volume:	100 cm <sup>3</sup>
Organisms/replicate:	10
Replicates/concentration:	3
Feeding regime:	YTC/leaf slurry/algae
Aeration during test:	none
Dilution Water:	Spring Water
Test duration:	28 days
Effect measured:	Survival, growth, and reproduction

---

**TEST RESULTS : SC- EE05-TX-001**  
***Hyalella azteca* Chronic Survival and Growth Test**

**Survival NOEC:** <6.25%

Statistical analysis method:

Normality test:

Homogeneity of variance test:

**Growth NOEC:** 12.5%

Statistical analysis method: Dunnett's

Normality test: Pass

Homogeneity of variance test: Pass

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Gravel	76.7	7.82-8.91	313	6.8	23.1
Control			(226-400)	(4.8-8.7)	(21.2-25.0)
6.25	3.3	8.17-9.00	311 (211-411)	6.3 (3.9-8.6)	22.5 (20.3-24.6)
12.5	6.7	8.16-8.99	316 (216-415)	6.4 (4.0-8.8)	22.1 (20.0-24.1)
25	0.0	8.19-8.00	312 (125-409)	6.7 (4.7-8.7)	22.8 (20.6-25.0)
50	0.0	8.25-8.99	300 (213-386)	6.5 (4.3-8.7)	22.3 (20.5-24.0)
100	0.0	8.28-9.02	278 (206-349)	6.6 (4.3-8.8)	22.9 (20.8-25.0)

**TEST SUMMARY: SC-EE06-TX-OO1**  
***Lumbriculus variegatus* Static Acute**

---

Test protocol:	WCC SOP E9
Test organism:	<i>Lumbriculus variegatus</i>
Source:	WCC Culture Laboratory
Age of test organism:	Adult
Test initiation:	11/13/94
Test termination:	11/16/94
Temperature:	20 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	300 mL glass beaker
Sediment Test volume:	100 cm <sup>3</sup>
Organisms/replicate:	10
Replicates/concentration:	4
Feeding regime:	none
Aeration during test:	none
Dilution Sediment:	ASTM mix
Test duration:	96 hours
Effect measured:	Mortality

---

**TEST RESULTS: SC-EE06-TX-201**  
***Lumbriculus variegatus* 96-Hour Static Acute**

$LC_{50} > 100\%$

Statistical analysis method: N/A

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )
Control	100.0	8.23	384	6.1 (5.8-6.4)	20.7 (20.1-21.2)	180	210
6.25	100.0	8.19	386	5.7 (5.3-6.0)	20.6 (20.0-21.1)		
12.5	100.0	8.16	405	5.5 (4.6-6.4)	20.8 (20.5-21.0)		
25	100.0	8.17	384	5.3 (4.5-6.1)	20.8 (20.6-21.0)		
50	100.0	8.17	374	5.8 (5.3-6.2)	20.6 (20.2-21.0)		
100	100.0	8.16	370	5.7 (5.0-6.4)	20.5 (20.0-21.0)	220	230

**SEDIMENT SAMPLE ARRIVAL INFORMATION**

<b>Collection Date/Time:</b>	10/26/94 @1420
<b>Use Date/Time:</b>	11/13/94
<b>Method of Shipment:</b>	Overnight Courier
<b>Temperature (°C):</b>	3.0
<b>pH:</b>	7.90
<b>Ammonia (mg/L):</b>	<0.01
<b>Conductivity (umhos/cm):</b>	460
<b>DO (mg/L):</b>	6.8

**TEST SUMMARY: SC-EE06-TX-001**  
***Hyallela azteca* 96 Hour Static Acute**

---

Test protocol:	WCC SOP E7
Test organism:	<i>Hyallela azteca</i>
Source:	Woodward-Clyde Consultants
Age of test organism:	Third instar
Test initiation:	11/10/94
Test termination:	11/13/94
Temperature:	25 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	500 mL glass beaker
Sediment Test volume:	100 cm <sup>3</sup>
Organisms/replicate:	10
Replicates/concentration:	3
Feeding regime:	none
Aeration during test:	none
Dilution sediment:	ASTM mix
Test duration:	96 hours
Effect measured:	Mortality

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**TEST RESULTS: SC-EE06-TX-001**  
***Hyallela azteca* 96-Hour Static Acute**

$LC_{50} > 77.1\%$

Statistical analysis method: Spearman-Karber

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )
Control	97.5	8.50	766	7.6 (7.4-7.8)	24.4 (23.2-25.5)	180	210
6.25	90.0			7.6 (7.3-7.9)	24.4 (23.2-25.5)		
12.5	80.0			7.5 (7.3-7.6)	24.5 (23.0-26.0)		
25	72.5			6.9 (6.2-7.5)	24.6 (23.2-26.0)		
50	62.5			7.5 (7.3-7.7)	24.4 (23.2-25.5)		
100	42.5	8.28	480	7.6 (7.3-7.8)	23.9 (22.8-25.0)	220	230

**SURFACE WATER SAMPLE ARRIVAL INFORMATION**

<b>Collection Date/Time:</b>	10/26/94 @1420
<b>Use Date/Time:</b>	11/10/94
<b>Method of Shipment:</b>	Overnight Courier
<b>Temperature (°C):</b>	3.0
<b>pH:</b>	7.90
<b>Ammonia (mg/L):</b>	<0.01
<b>Conductivity (umhos/cm):</b>	460
<b>DO (mg/L):</b>	6.8

**TEST SUMMARY: SC-EE06-TX-001**  
***Hyalella azteca* Chronic Sediment**

---

Test protocol:	WCC SOP E7
Test organism:	<i>Hyalella azteca</i>
Source:	WCC
Age of test organism:	Second instar
Test initiation:	1/17/95
Test termination:	2/14/95
Temperature:	25 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	500 mL glass beaker
Sediment Test volume:	100 cm <sup>3</sup>
Organisms/replicate:	10
Replicates/concentration:	3
Feeding regime:	YTC/leaf slurry/algae
Aeration during test:	none
Dilution Water:	Spring Water
Test duration:	28 days
Effect measured:	Survival, growth, and reproduction

---

**TEST RESULTS : SC- EE06-TX-001**  
***Hyalella azteca* Chronic Survival and Growth Test**

**Survival NOEC:** <5.0%

Statistical analysis method:	Bonferroni
Normality test:	Pass
Homogeneity of variance test:	Fail

**Growth NOEC:** 80%

Statistical analysis method:	Dunnett's
Normality test:	Pass
Homogeneity of variance test:	Pass

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Gravel Control	80.0	7.65-8.20	373 (230-515)	6.0 (4.2-7.7)	23.5 (20.0-27.0)
5	33.3	8.07-8.57	366 (305-426)	6.2 (4.6-7.7)	23.3 (19.8-26.8)
10	13.3	8.06-8.46	348 (282-414)	6.3 (4.8-7.7)	22.9 (20.0-25.8)
20	20.0	8.17-8.47	351 (315-387)	6.0 (4.6-7.4)	22.9 (20.0-25.8)
40	13.3	8.26-8.45	375 (319-431)	5.4 (3.7-7.1)	22.9 (20.0-25.8)
80	13.3	8.20-8.45	368 (329-407)	5.0 (3.1-6.8)	22.5 (20.0-25.0)

**TEST SUMMARY: SC-EE07-TX-OO1**  
***Lumbriculus variegatus* Static Acute**

---

Test protocol:	WCC SOP E9
Test organism:	<i>Lumbriculus variegatus</i>
Source:	WCC Culture Laboratory
Age of test organism:	Adult
Test initiation:	11/13/94
Test termination:	11/16/94
Temperature:	20 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	300 mL glass beaker
Sediment Test volume:	100 cm <sup>3</sup>
Organisms/replicate:	10
Replicates/concentration:	4
Feeding regime:	none
Aeration during test:	none
Dilution Sediment:	ASTM mix
Test duration:	96 hours
Effect measured:	Mortality

---

**TEST RESULTS: SC-EE07-TX-201**  
***Lumbriculus variegatus* 96-Hour Static Acute**

LC<sub>50</sub>>100%  
 Statistical analysis method:N/A

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )
Control	100.0	8.23	384	6.1 (5.8-6.4)	20.7 (20.1-21.2)	180	210
6.25	100.0	8.20	419	5.7 (5.2-6.2)	20.9 (20.8-21.0)		
12.5	100.0	8.20	393	5.7 (5.3-6.1)	20.1 (20.0-20.2)		
25	100.0	8.20	393	5.5 (4.8-6.1)	20.6 (20.0-21.0)		
50	100.0	8.25	379	5.7 (5.1-6.3)	20.3 (20.0-20.5)		
100	95.0	8.30	374	6.1 (5.2-6.9)	20.9 (20.7-21.0)	200	230

**SEDIMENT SAMPLE ARRIVAL INFORMATION**

<b>Collection Date/Time:</b>	10/26/94 @1200
<b>Use Date/Time:</b>	11/13/94
<b>Method of Shipment:</b>	Overnight Courier
<b>Temperature (°C):</b>	1.5
<b>pH:</b>	8.09
<b>Ammonia (mg/L)</b>	<0.01
<b>Conductivity (umhos/cm):</b>	407
<b>DO (mg/L)</b>	7.0

**TEST SUMMARY: SC-EE07-TX-001**  
***Hyallela azteca* 96 Hour Static Acute**

---

Test protocol:	WCC SOP E7
Test organism:	<i>Hyallela azteca</i>
Source:	Woodward-Clyde Consultants
Age of test organism:	Third instar
Test initiation:	11/10/94
Test termination:	11/13/94
Temperature:	25 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	500 mL glass beaker
Sediment Test volume:	100 cm <sup>3</sup>
Organisms/replicate:	10
Replicates/concentration:	3
Feeding regime:	none
Aeration during test:	none
Dilution sediment:	ASTM mix
Test duration:	96 hours
Effect measured:	Mortality

---

**TEST RESULTS: SC-EE07-TX-001**  
***Hyallela azteca* 96-Hour Static Acute**

$LC_{50} = 78.85$

Statistical analysis method:N/A

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )
Control	97.5	8.50	766	7.6 (7.4-7.8)	24.4 (23.2-25.5)	180	210
6.25	100.0			6.3 (4.9-7.7)	24.3 (23.0-25.5)		
12.5	92.5			6.9 (6.4-7.4)	24.3 (23.0-25.5)		
25	100.0			7.1 (6.4-7.8)	24.3 (23.0-25.5)		
50	87.5			7.3 (7.2-7.3)	24.3 (23.0-25.5)		
100	30.0	8.44	401	7.1 (6.2-7.9)	24.3 (22.5-26.0)	200	230

**SURFACE WATER SAMPLE ARRIVAL INFORMATION**

**Collection Date/Time:** 10/26/94 @ 1200

**Use Date/Time:** 11/10/94

**Method of Shipment:** Overnight Courier

**Temperature (°C):** 1.5

**pH:** 8.09

**Ammonia (mg/L):** <0.01

**Conductivity (umhos/cm):** 407

**DO (mg/L):** 7.0

**TEST SUMMARY: SC-EE07-TX-001**  
***Hyalella azteca* Chronic Sediment**

---

Test protocol:	WCC SOP E7
Test organism:	<i>Hyalella azteca</i>
Source:	WCC
Age of test organism:	Second instar
Test initiation:	1/17/95
Test termination:	2/14/95
Temperature:	25 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	500 mL glass beaker
Sediment Test volume:	100 cm <sup>3</sup>
Organisms/replicate:	10
Replicates/concentration:	3
Feeding regime:	YTC/leaf slurry/algae
Aeration during test:	none
Dilution Water:	Spring Water
Test duration:	28 days
Effect measured:	Survival, growth, and reproduction

---

**TEST RESULTS : SC- EE07-TX-001**  
***Hyalella azteca* Chronic Survival and Growth Test**

**Survival NOEC:** <5.0%

Statistical analysis method:	Bonferroni
Normality test:	Pass
Homogeneity of variance test:	Fail

**Growth NOEC:** 80%

Statistical analysis method:	Dunnett's
Normality test:	Pass
Homogeneity of variance test:	Pass

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Gravel	80.0	7.65-8.20	373	6.0	23.5
Control			(230-515)	(4.2-7.7)	(20.0-27.0)
5	13.3	8.23-8.52	349	6.0	23.0
			(317-380)	(4.0-7.9)	(19.8-26.2)
10	6.7	8.22-8.57	345	6.0	23.1
			(316-473)	(4.3-7.6)	(20.0-26.1)
20	3.3	8.22-8.62	376	5.7	22.8
			(309-443)	(4.1-7.3)	(20.0-25.5)
40	3.3	8.22-8.72	378	5.5	23.1
			(288-467)	(3.7-7.3)	(20.0-26.2)
80	6.7	8.23-8.93	361	5.4	23.1
			(308-413)	(4.0-6.7)	(20.0-26.2)

**TEST SUMMARY: SC-EE08-TX-OO1**  
***Lumbriculus variegatus* Static Acute**

---

Test protocol:	WCC SOP E9
Test organism:	<i>Lumbriculus variegatus</i>
Source:	WCC Culture Laboratory
Age of test organism:	Adult
Test initiation:	11/13/94
Test termination:	11/16/94
Temperature:	20 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	300 mL glass beaker
Sediment Test volume:	100 cm <sup>3</sup>
Organisms/replicate:	10
Replicates/concentration:	4
Feeding regime:	none
Aeration during test:	none
Dilution Sediment:	ASTM mix
Test duration:	96 hours
Effect measured:	Mortality

---

**TEST RESULTS: SC-EE08-TX-001**  
***Lumbriculus variegatus* 96-Hour Static Acute**

LC<sub>50</sub> >100%  
 Statistical analysis method:N/A

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )
Control	100.0	8.24	403	6.0 (5.5-6.4)	21.0 (20.9-21.0)	220	230
6.25	100.0	8.19	415	5.3 (4.8-5.8)	20.8 (20.5-21.0)		
12.5	100.0	8.24	390	5.6 (4.9-6.2)	20.6 (20.2-21.0)		
25	97.5	8.22	396	5.4 (4.2-5.1)	20.6 (20.2-21.0)		
50	100.0	8.13	412	4.7 (4.2-5.1)	20.6 (20.2-21.0)		
100	100.0	8.26	382	4.5 (3.0-5.9)	20.6 (20.2-21.0)	260	280

**SEDIMENT SAMPLE ARRIVAL INFORMATION**

<b>Collection Date/Time:</b>	10/26/94 @1100
<b>Use Date/Time:</b>	11/13/94
<b>Method of Shipment:</b>	Overnight Courier
<b>Temperature (°C):</b>	1.0
<b>pH:</b>	7.93
<b>Ammonia (mg/L):</b>	<0.01
<b>Conductivity (umhos/cm):</b>	572
<b>DO (mg/L):</b>	1.5

**TEST SUMMARY: SC-EE08-TX-001**  
***Hyallela azteca* 96 Hour Static Acute**

---

Test protocol:	WCC SOP E7
Test organism:	<i>Hyallela azteca</i>
Source:	Woodward-Clyde Consultants
Age of test organism:	Third instar
Test initiation:	11/12/94
Test termination:	11/15/94
Temperature:	25 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	500 mL glass beaker
Sediment Test volume:	100 cm <sup>3</sup>
Organisms/replicate:	10
Replicates/concentration:	3
Feeding regime:	none
Aeration during test:	none
Dilution sediment:	ASTM mix
Test duration:	96 hours
Effect measured:	Mortality

---

**TEST RESULTS: SC-EE08-TX-001**  
***Hyallela azteca* 96-Hour Static Acute**

LC<sub>50</sub> > 100%  
 Statistical analysis method:N/A

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )
Control	95.0	8.38	741	7.4 (6.8-7.9)	24.3 (23.5-25.0)	220	210
6.25	97.5	8.48	692	7.7 (7.5-7.9)	24.3 (23.5-25.0)		
12.5	97.5	8.46	707	7.7 (7.6-7.7)	24.3 (23.5-25.0)		
25	100.0	8.44	685	7.6 (7.4-*7.8)	24.2 (23.4-25.0)		
50	92.0	8.50	666	7.7 (7.5-7.8)	24.3 (23.5-25.0)		
100	80.0	8.45	631	7.2 (6.9-7.4)	24.3 (23.5-25.0)	270	240

**SURFACE WATER SAMPLE ARRIVAL INFORMATION**

**Collection Date/Time:** 10/26/94 @ 1100

**Use Date/Time:** 11/12/94

**Method of Shipment:** Overnight Courier

**Temperature (°C):** 1.0

**pH:** 8.00

**Ammonia (mg/L):** <0.01

**Conductivity (umhos/cm):** 506

**DO (mg/L):** 1.2

**TEST SUMMARY: SC-EE08-TX-001**  
***Hyalella azteca* Chronic Sediment**

---

Test protocol:	WCC SOP E7
Test organism:	<i>Hyalella azteca</i>
Source:	WCC
Age of test organism:	Second instar
Test initiation:	1/25/95
Test termination:	2/22/95
Temperature:	25 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	500 mL glass beaker
Sediment Test volume:	100 cm <sup>3</sup>
Organisms/replicate:	10
Replicates/concentration:	3
Feeding regime:	YTC/leaf slurry/algae
Aeration during test:	none
Dilution Water:	Spring Water
Test duration:	28 days
Effect measured:	Survival, growth, and reproduction

---

**TEST RESULTS : SC- EE08-TX-001**  
***Hyalella azteca* Chronic Survival and Growth Test**

**Survival NOEC:** <6.25%

Statistical analysis method: Bonferroni

Normality test: Pass

Homogeneity of variance test: Fail

**Growth NOEC:** 100%

Statistical analysis method: Dunnett's

Normality test: Pass

Homogeneity of variance test: Pass

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Gravel Control	76.7	7.82-8.91	313 (226-400)	6.8 (4.8-8.7)	23.1 (21.2-25.0)
6.25	40.0	8.08-8.84	309 (208-410)	6.5 (4.3-8.7)	22.9 (21.0-24.8)
12.5	30.0	8.13-8.85	444 (204-480)	6.5 (4.1-8.8)	23.0 (20.9-25.0)
25	16.7	8.15-8.83	346 (213-479)	6.6 (4.5-8.7)	22.9 (20.9-25.)
50	36.7	8.14-8.86	328 (207-449)	6.6 (4.4-8.7)	22.2 (20.4-24.)
100	10.0	8.11-8.83	299 (208-389)	6.3 (3.9-8.7)	22.6 (20.3-24.8)

**TEST SUMMARY: SC-EE09-TX-OO1**  
***Lumbriculus variegatus* Static Acute**

---

Test protocol:	WCC SOP E9
Test organism:	<i>Lumbriculus variegatus</i>
Source:	WCC Culture Laboratory
Age of test organism:	Adult
Test initiation:	11/13/94
Test termination:	11/16/94
Temperature:	20 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	300 mL glass beaker
Sediment Test volume:	100 cm <sup>3</sup>
Organisms/replicate:	10
Replicates/concentration:	4
Feeding regime:	none
Aeration during test:	none
Dilution Sediment:	ASTM mix
Test duration:	96 hours
Effect measured:	Mortality

---

**TEST RESULTS: SC-EE09-TX-001**  
***Lumbriculus variegatus* 96-Hour Static Acute**

LC<sub>50</sub>>100%

Statistical analysis method: N/A

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )
Control	100.0	8.24	403	6.0 (5.5-6.4)	21.0 (20.9-21.0)	220	230
6.25	100.0	8.20	421	5.4 (4.7-6.0)	20.9 (20.8-21.0)		
12.5	100.0	8.22	415	5.4 (4.6-6.2)	20.6 (20.2-21.0)		
25	100.0	8.25	379	5.8 (5.2-6.3)	20.5 (20.4-21.0)		
50	100.0	8.29	385	5.5 (4.6-6.4)	20.7 (20.4-21.0)		
100	100.0	8.35	375	5.8 (4.9-6.6)	20.8 (20.5-21.0)	210	230

**SEDIMENT SAMPLE ARRIVAL INFORMATION**

<b>Collection Date/Time:</b>	10/26/94 @ 0930
<b>Use Date/Time:</b>	11/13/94
<b>Method of Shipment:</b>	Overnight Courier
<b>Temperature (°C):</b>	2.0
<b>pH:</b>	8.20
<b>Ammonia (mg/L):</b>	<0.01
<b>Conductivity (umhos/cm):</b>	460
<b>DO (mg/L):</b>	6.7

**TEST SUMMARY: SC-EE09-TX-001**  
***Hyallela azteca* 96 Hour Static Acute**

---

Test protocol:	WCC SOP E7
Test organism:	<i>Hyallela azteca</i>
Source:	Woodward-Clyde Consultants
Age of test organism:	Third instar
Test initiation:	11/12/94
Test termination:	11/15/94
Temperature:	25 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	500 mL glass beaker
Sediment Test volume:	100 cm <sup>3</sup>
Organisms/replicate:	10
Replicates/concentration:	3
Feeding regime:	none
Aeration during test:	none
Dilution sediment:	ASTM mix
Test duration:	96 hours
Effect measured:	Mortality

---

**TEST RESULTS: SC-EE09-TX-001**  
***Hyallela azteca* 96-Hour Static Acute**

LC<sub>50</sub> > 100%

Statistical analysis method: N/A

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )
Control	95.0	8.38	741	7.4 (6.8-7.9)	24.3 (23.5-25.0)	220	210
6.25	97.5	8.43	735	7.6 (7.4-7.7)	24.3 (23.5-25.0)		
12.5	100.0	8.45	735	7.7 (7.6-7.8)	24.0 (23.5-24.5)		
25	82.5	8.46	724	7.6 (7.3-7.8)	24.3 (23.5-25.0)		
50	90.0	8.44	599	7.6 (7.4-7.8)	24.0 (23.5-24.5)		
100	57.5	8.16	480	7.4 (7.0-7.8)	24.3 (23.5-25.0)	220	240

**SURFACE WATER SAMPLE ARRIVAL INFORMATION**

**Collection Date/Time:** 10/26/94 @ 0930

**Use Date/Time:** 11/12/94

**Method of Shipment:** Overnight Courier

**Temperature (°C):** 2.0

**pH:** 8.32

**Ammonia (mg/L):** <0.01

**Conductivity (umhos/cm):** 444

**DO (mg/L):** 6.6

**TEST SUMMARY: SC-EE09-TX-001**  
***Hyalella azteca* Chronic Sediment**

---

Test protocol:	WCC SOP E7
Test organism:	<i>Hyalella azteca</i>
Source:	WCC
Age of test organism:	Second instar
Test initiation:	1/25/95
Test termination:	2/22/95
Temperature:	25 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	500 mL glass beaker
Sediment Test volume:	100 cm <sup>3</sup>
Organisms/replicate:	10
Replicates/concentration:	3
Feeding regime:	YTC/leaf slurry/algae
Aeration during test:	none
Dilution Water:	Spring Water
Test duration:	28 days
Effect measured:	Survival, growth, and reproduction

---

**TEST RESULTS : SC- EE09-TX-001**  
***Hyalella azteca* Chronic Survival and Growth Test**

<b>Survival NOEC:</b>	<6.25%
Statistical analysis method:	Bonferroni
Normality test:	Pass
Homogeneity of variance test:	Fail
<b>Growth NOEC:</b>	50%
Statistical analysis method:	Dunnett's
Normality test:	Pass
Homogeneity of variance test:	Pass

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Gravel	76.7	7.82-8.91	313	6.8	23.1
Control			(226-400)	(4.8-8.7)	(21.2-25.0)
6.25	43.3	8.15-8.89	316 (204-428)	6.5 (4.3-8.6)	22.3 (20.5-24.0)
12.5	30.0	8.15-8.92	315 (209-421)	6.6 (4.4-8.8)	22.7 (20.4-25.0)
25	20.0	8.12-8.94	310 (211-408)	6.4 (4.0-8.8)	22.5 (20.1-24.8)
50	6.7	8.17-8.87	304 (212-396)	6.5 (4.2-8.7)	22.1 (20.2-24.0)
100	0.0	8.19-8.87	309 (212-406)	6.4 (4.1-8.7)	22.5 (20.4-24.6)

**TEST SUMMARY: SC-EE10-TX-OO1**  
***Lumbriculus variegatus* Static Acute**

---

Test protocol:	WCC SOP E9
Test organism:	<i>Lumbriculus variegatus</i>
Source:	WCC Culture Laboratory
Age of test organism:	Adult
Test initiation:	11/12/94
Test termination:	11/15/94
Temperature:	20 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	300 mL glass beaker
Sediment Test volume:	100 cm <sup>3</sup>
Organisms/replicate:	10
Replicates/concentration:	4
Feeding regime:	none
Aeration during test:	none
Dilution Sediment:	ASTM mix
Test duration:	96 hours
Effect measured:	Mortality

---

**TEST RESULTS: SC-EE10-TX-001**  
***Lumbriculus variegatus* 96-Hour Static Acute**

LC<sub>50</sub> >100%  
 Statistical analysis method: N/A

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )
Control	100.0	8.10	404	7.2	18.2	200	200
6.25	100.0	7.88	411	7.4 (7.1-7.6)	18.1 (18.0-19.2)		
12.5	100.0	7.93	414	6.8 (6.4-7.2)	18.5 (18.0-18.9)		
25	100.0	7.94	408	6.8 (6.3-7.3)	18.6 (18.0-19.1)		
50	100.0	7.95	398	6.7 (6.6-6.8)	18.5 (18.0-19.0)		
100	100.0	8.02	397	7.3 (7.2-7.3)	18.5 (18.0-19.0)	180	230

**SEDIMENT SAMPLE ARRIVAL INFORMATION**

<b>Collection Date/Time:</b>	10/25/94 @1515
<b>Use Date/Time:</b>	11/12/94
<b>Method of Shipment:</b>	Overnight Courier
<b>Temperature (°C):</b>	1.0
<b>pH:</b>	8.23
<b>Ammonia (mg/L)</b>	<0.01
<b>Conductivity (umhos/cm):</b>	444
<b>DO (mg/L)</b>	7.7

**TEST SUMMARY: SC-EE10-TX-201**  
***Hyallela azteca* 96 Hour Static Acute**

---

Test protocol:	WCC SOP E7
Test organism:	<i>Hyallela azteca</i>
Source:	Woodward-Clyde Consultants
Age of test organism:	Third instar
Test initiation:	11/11/94
Test termination:	11/14/94
Temperature:	25 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	500 mL glass beaker
Sediment Test volume:	100 cm <sup>3</sup>
Organisms/replicate:	10
Replicates/concentration:	3
Feeding regime:	none
Aeration during test:	none
Dilution sediment:	ASTM mix
Test duration:	96 hours
Effect measured:	Mortality

---

**TEST RESULTS: SC-EE10-TX-001**  
***Hyallela azteca* 96-Hour Static Acute**

LC<sub>50</sub> > 100%  
 Statistical analysis method: N/A

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )
Control	97.5	8.50	766	7.6 (7.4-7.8)	24.4 (23.2-25.5)	200	200
6.25	97.5			7.6 (7.2-7.9)	24.8 (23.0-26.5)		
12.5	90.0			7.5 (7.3-7.7)	24.5 (23.0-26.0)		
25	100.0			7.6 (7.5-7.7)	24.4 (23.2-25.5)		
50	100.0			7.5 (7.2-7.8)	25.2 (23.8-26.5)		
100	97.5	8.15	537	7.3 (7.2-7.3)	24.5 (23.0-26.0)	180	230

**SURFACE WATER SAMPLE ARRIVAL INFORMATION**

<b>Collection Date/Time:</b>	10/25/94 @ 1515
<b>Use Date/Time:</b>	11/11/94
<b>Method of Shipment:</b>	Overnight Courier
<b>Temperature (°C):</b>	1.0
<b>pH:</b>	8.23
<b>Ammonia (mg/L):</b>	<0.01
<b>Conductivity (umhos/cm):</b>	444
<b>DO (mg/L):</b>	7.7

**TEST SUMMARY: SC-EE10-TX-001**  
***Hyalella azteca* Chronic Sediment**

---

Test protocol:	WCC SOP E7
Test organism:	<i>Hyalella azteca</i>
Source:	WCC
Age of test organism:	Second instar
Test initiation:	1/17/95
Test termination:	2/14/95
Temperature:	25 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	500 mL glass beaker
Sediment Test volume:	100 cm <sup>3</sup>
Organisms/replicate:	10
Replicates/concentration:	3
Feeding regime:	YTC/leaf slurry/algae
Aeration during test:	none
Dilution Water:	Spring Water
Test duration:	28 days
Effect measured:	Survival, growth, and reproduction

---

**TEST RESULTS : SC- EE10-TX-001**  
***Hyalella azteca* Chronic Survival and Growth Test**

<b>Survival NOEC:</b>	6.25%
Statistical analysis method:	Bonferroni
Normality test:	Pass
Homogeneity of variance test:	Fail
<b>Growth NOEC:</b>	100%
Statistical analysis method:	Dunnett's
Normality test:	Pass
Homogeneity of variance test:	Pass

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Gravel	80.0	7.65-8.20	373	6.0	23.5
Control			(230-515)	(4.2-7.7)	(20.0-27.0)
6.25	63.3	8.07-8.57	370	6.1	22.9
			(317-423)	(4.5-7.7)	(19.8-26.0)
12.5	26.7	8.06-8.51	314	5.8	23.0
			(282-345)	(4.1-7.5)	(19.8-26.2)
25	33.3	8.17-8.51	359	6.0	23.2
			(308-409)	(4.4-7.6)	(19.9-26.4)
50	33.3	8.26-8.49	365	6.1	23.0
			(318-411)	(4.7-7.5)	(20.0-26.0)
100	50.0	8.01-8.45	365	5.9	22.8
			(291-438)	(4.5-7.3)	(20.0-25.5)

**TEST SUMMARY: SC-EW01-TX-OO1**  
***Lumbriculus variegatus* Static Acute**

---

Test protocol:	WCC SOP E9
Test organism:	<i>Lumbriculus variegatus</i>
Source:	WCC Culture Laboratory
Age of test organism:	Adult
Test initiation:	11/12/94
Test termination:	11/15/94
Temperature:	20 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	300 mL glass beaker
Sediment Test volume:	100 cm <sup>3</sup>
Organisms/replicate:	10
Replicates/concentration:	4
Feeding regime:	none
Aeration during test:	none
Dilution Sediment:	ASTM mix
Test duration:	96 hours
Effect measured:	Mortality

---

**TEST RESULTS: SC-EW01-TX-001**  
***Lumbriculus variegatus* 96-Hour Static Acute**

LC<sub>50</sub> >100%  
 Statistical analysis method:N/A

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )
Control	97.5	7.92	397	7.0 (6.9-7.0)	19.2 (18.5*-19.8)	200	200
6.25	100.0	8.13	367	5.8 (4.7-6.9)	18.9 (18.0-19.8)		
12.5	100.0	8.13	309	6.0 (4.8-7.1)	18.8 (18.0-19.5)		
25	100.0	8.14	363	6.3 (5.4-7.1)	18.8 (18.6-19.0)		
50	100.0	8.09	396	6.3 (5.5-7.0)	19.3 (19.0-19.5)		
100	100.0	8.17	382	6.3 (5.5-7.1)	19.5 (19.0-20.0)	190	200

**SEDIMENT SAMPLE ARRIVAL INFORMATION**

<b>Collection Date/Time:</b>	10/25/94 @ 1330
<b>Use Date/Time:</b>	11/12/94
<b>Method of Shipment:</b>	Overnight Courier
<b>Temperature (°C):</b>	1.0
<b>pH:</b>	8.28
<b>Ammonia (mg/L):</b>	<0.01
<b>Conductivity (umhos/cm):</b>	374
<b>DO (mg/L)</b>	7.9

**TEST SUMMARY: SC-EW01-TX-001**  
***Hyallela azteca* 96 Hour Static Acute**

---

Test protocol:	WCC SOP E7
Test organism:	<i>Hyallela azteca</i>
Source:	Woodward-Clyde Consultants
Age of test organism:	Third instar
Test initiation:	11/11/94
Test termination:	11/14/94
Temperature:	25 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	500 mL glass beaker
Sediment Test volume:	100 cm <sup>3</sup>
Organisms/replicate:	10
Replicates/concentration:	3
Feeding regime:	none
Aeration during test:	none
Dilution sediment:	ASTM mix
Test duration:	96 hours
Effect measured:	Mortality

---

**TEST RESULTS: SC-EW01-TX-001**  
***Hyallela azteca* 96-Hour Static Acute**

$LC_{50} > 100\%$

Statistical analysis method:N/A

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )
Control	97.5	8.50	766	7.6 (7.4-7.8)	24.4 (23.2-25.5)	200	200
6.25	97.5			7.3 (7.0-7.6)	24.5 (23.5-25.5)		
12.5	87.5			7.4 (7.1-7.6)	24.7 (23.8-25.5)		
25	82.5			7.4 (7.1-7.7)	24.4 (23.3-25.5)		
50	75.0			7.3 (6.9-7.6)	24.4 (23.2-25.5)		
100	60.0	8.28	418	7.6 (7.5-7.6)	24.5 (23.0-26.0)	190	200

**SAMPLE ARRIVAL INFORMATION**

<b>Collection Date/Time:</b>	10/25/94 @1330
<b>Use Date/Time:</b>	11/11/94
<b>Method of Shipment:</b>	Overnight Courier
<b>Temperature (°C):</b>	1.0
<b>pH:</b>	8.28
<b>Ammonia (mg/L):</b>	<0.01
<b>Conductivity (umhos/cm):</b>	374
<b>DO (mg/L):</b>	7.9

**TEST SUMMARY: SC-EW01-TX-001**  
***Hyalella azteca* Chronic Sediment**

---

Test protocol:	WCC SOP E7
Test organism:	<i>Hyalella azteca</i>
Source:	WCC
Age of test organism:	Second instar
Test initiation:	1/17/95
Test termination:	2/14/95
Temperature:	25 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	500 mL glass beaker
Sediment Test volume:	100 cm <sup>3</sup>
Organisms/replicate:	10
Replicates/concentration:	3
Feeding regime:	YTC/leaf slurry/algae
Aeration during test:	none
Dilution Water:	Spring Water
Test duration:	28 days
Effect measured:	Survival, growth, and reproduction

---

**TEST RESULTS : SC- EW01-TX-001**  
***Hyalella azteca* Chronic Survival and Growth Test**

**Survival NOEC:**

Statistical analysis method:	<6.25%
Normality test:	Kruskal-Wallis
Homogeneity of variance test:	Pass

**Growth NOEC:**

Statistical analysis method:	12.5%
Normality test:	Dunnet's
Homogeneity of variance test:	Pass

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Gravel	80.0	7.65-8.20	373	6.0	23.5
Control	.		(230-515)	(4.2-7.7)	(20.0-27.0)
6.25	36.7	7.84-8.23	407	5.9	23.4
			(299-489)	(4.3-7.4)	(19.8-27.0)
12.5	36.7	7.94-8.35	356	6.1	22.9
			(302-409)	(4.5-7.6)	(19.8-26.0)
25	0.0	8.02-8.33	359	5.9	23.2
			(302-415)	(4.3-7.5)	(20.0-26.4)
50	0.0	7.97-8.36	323	6.1	23.1
			(259-387)	(4.6-7.5)	(19.9-26.2)
100	0.0	7.93-8.32	413	5.6	23.2
			(299-526)	(4.2-7.0)	(19.9-26.5)

**TEST SUMMARY: SC-EW02-TX-OO1**  
***Lumbriculus variegatus* Static Acute**

---

Test protocol:	WCC SOP E9
Test organism:	<i>Lumbriculus variegatus</i>
Source:	WCC Culture Laboratory
Age of test organism:	Adult
Test initiation:	11/12/94
Test termination:	11/15/94
Temperature:	20 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	300 mL glass beaker
Sediment Test volume:	100 cm <sup>3</sup>
Organisms/replicate:	10
Replicates/concentration:	4
Feeding regime:	none
Aeration during test:	none
Dilution Sediment:	ASTM mix
Test duration:	96 hours
Effect measured:	Mortality

---

**TEST RESULTS: SC-EW02-TX-001**  
***Lumbriculus variegatus* 96-Hour Static Acute**

LC<sub>50</sub>>100%  
 Statistical analysis method: N/A

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )
Control	97.5	7.92	397	7.0 (6.9-7.0)	19.2 (18.5-19.8)	200	200
6.25	100.0	8.04	424	5.9 (4.7-7.1)	19.4 (18.8-20.0)		
12.5	97.5	7.99	425	5.9 (5.0-6.8)	19.5 (19.0-20.0)		
25	100.0	8.09	382	6.1 (5.1-7.1)	19.5 (19.0-20.0)		
50	100.0	8.16	366	6.4 (5.5-7.2)	19.0 (18.0-20.0)		
100	100.0	8.12	361	6.5 (5.8-7.2)	19.2 (18.8-19.5)	150	230

**SEDIMENT SAMPLE ARRIVAL INFORMATION**

<b>Collection Date/Time:</b>	10/25/94 @ 1000
<b>Use Date/Time:</b>	11/12/94
<b>Method of Shipment:</b>	Overnight Courier
<b>Temperature (°C):</b>	2.5
<b>pH:</b>	8.29
<b>Ammonia (mg/L)</b>	<0.01
<b>Conductivity (umhos/cm):</b>	397
<b>DO (mg/L)</b>	7.8

**TEST SUMMARY: SC-EW02-TX-201**  
***Hyallela azteca* 96 Hour Static Acute**

---

Test protocol:	WCC SOP E7
Test organism:	<i>Hyallela azteca</i>
Source:	Woodward-Clyde Consultants
Age of test organism:	Third instar
Test initiation:	11/10/94
Test termination:	11/13/94
Temperature:	25 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	500 mL glass beaker
Sediment Test volume:	100 cm <sup>3</sup>
Organisms/replicate:	10
Replicates/concentration:	3
Feeding regime:	none
Aeration during test:	none
Dilution sediment:	ASTM mix
Test duration:	96 hours
Effect measured:	Mortality

---

**TEST RESULTS: SC-EW02-TX-201**  
***Hyallela azteca* 96-Hour Static Acute**

LC<sub>50</sub> = 58.02

Statistical analysis method: Spearman-Karber

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )
Control	97.5	8.50	766	7.6 (7.4-7.8)	24.4 (23.2-25.5)	200	200
6.25	97.5			4.5 (0.3-8.2)	25.3 (24.8-25.8)		
12.5	100.0			4.7 (0.3-8.2)	25.3 (25.0-25.5)		
25	92.5			4.8 (0.3-8.3)	24.4 (23.0-25.2)		
50	67.5			4.0 (0.4-8.3)	24.3 (23.0-25.0)		
100	5.0			5.7 (4.2-8.3)	24.4 (24.0-25.2)	150	230

**SURFACE WATER SAMPLE ARRIVAL INFORMATION**

<b>Collection Date/Time:</b>	10/25/94 @ 1000
<b>Use Date/Time:</b>	11/10/94
<b>Method of Shipment:</b>	Overnight Courier
<b>Temperature (°C):</b>	2.5
<b>pH:</b>	8.29
<b>Ammonia (mg/L):</b>	<0.01
<b>Conductivity (umhos/cm):</b>	397
<b>DO (mg/L):</b>	7.8

**TEST SUMMARY: SC-EW02-TX-001**  
***Hyalella azteca* Chronic Sediment**

---

Test protocol:	WCC SOP E7
Test organism:	<i>Hyalella azteca</i>
Source:	WCC
Age of test organism:	Second instar
Test initiation:	1/17/95
Test termination:	2/14/95
Temperature:	25 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	500 mL glass beaker
Sediment Test volume:	100 cm <sup>3</sup>
Organisms/replicate:	10
Replicates/concentration:	3
Feeding regime:	YTC/leaf slurry/algae
Aeration during test:	none
Dilution Water:	Spring Water
Test duration:	28 days
Effect measured:	Survival, growth, and reproduction

---

**TEST RESULTS : SC- EW02-TX-001**  
***Hyalella azteca* Chronic Survival and Growth Test**

<b>Survival NOEC:</b>	<4.0%
Statistical analysis method:	Kruskal-Wallis
Normality test:	Pass
Homogeneity of variance test:	Fail
<b>Growth NOEC:</b>	32%
Statistical analysis method:	Dunnett's
Normality test:	Pass
Homogeneity of variance test:	Pass

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Gravel	80.0	7.65-8.20	373	6.0	23.5
Control			(230-515)	(4.2-7.7)	(20.0-27.0)
4	26.7	7.95-8.42	358	6.0	23.1
			(302-413)	(4.2-7.7)	(19.9-26.2)
8	16.7	8.15-8.46	358	5.9	23.1
			(310-405)	(4.1-7.7)	(19.9-26.2)
16	26.7	8.19-8.47	361	5.9	23.1
			(308-413)	(4.2-7.5)	(19.9-26.2)
32	3.3	8.15-8.54	355	5.6	23.2
			(318-391)	(3.6-7.5)	(19.9-26.4)
64	0.0	8.13-8.72	333	5.6	23.1
			(291-375)	(3.8-7.3)	(19.9-26.2)

**TEST SUMMARY: SC-EW03-TX-OO1**  
***Lumbriculus variegatus* Static Acute**

---

Test protocol:	WCC SOP E9
Test organism:	<i>Lumbriculus variegatus</i>
Source:	WCC Culture Laboratory
Age of test organism:	Adult
Test initiation:	11/12/94
Test termination:	11/15/94
Temperature:	20 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	300 mL glass beaker
Sediment Test volume:	100 cm <sup>3</sup>
Organisms/replicate:	10
Replicates/concentration:	4
Feeding regime:	none
Aeration during test:	none
Dilution Sediment:	ASTM mix
Test duration:	96 hours
Effect measured:	Mortality

---

**TEST RESULTS: SC-EW03-TX-001**  
***Lumbriculus variegatus* 96-Hour Static Acute**

$LC_{50} > 100$

Statistical analysis method: N/A

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )
Control	97.5	8.10	404	7.2	18.2	200	200
6.25	100.0	8.13	407	7.2	18.1 (18.0-18.2)		
12.5	97.5	8.15	422	7.3 (7.0-7.5)	18.3 (18.0-18.5)		
25	100.0	8.13	400	7.1 (6.8-7.3)	18.1 (18.0-18.2)		
50	97.5	8.18	400	7.4 (7.3-7.5)	18.1 (18.0-18.2)		
100	100.0	8.27	387	7.7 (7.6-7.7)	18.6 (18.2-18.8)	200	220

**SEDIMENT SAMPLE ARRIVAL INFORMATION**

<b>Collection Date/Time:</b>	10/25/94 @ 0900
<b>Use Date/Time:</b>	11/12/94
<b>Method of Shipment:</b>	Overnight Courier
<b>Temperature (°C):</b>	2.5
<b>pH:</b>	8.40
<b>Ammonia (mg/L):</b>	<0.01
<b>Conductivity (umhos/cm):</b>	409
<b>DO (mg/L):</b>	7.9

**TEST SUMMARY: SC-EW03-TX-001**  
***Hyallela azteca* 96 Hour Static Acute**

---

Test protocol:	WCC SOP E7
Test organism:	<i>Hyallela azteca</i>
Source:	Woodward-Clyde Consultants
Age of test organism:	Third instar
Test initiation:	11/14/94
Test termination:	11/18/94
Temperature:	25 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	500 mL glass beaker
Sediment Test volume:	100 cm <sup>3</sup>
Organisms/replicate:	10
Replicates/concentration:	3
Feeding regime:	none
Aeration during test:	none
Dilution sediment:	ASTM mix
Test duration:	96 hours
Effect measured:	Mortality

---

**TEST RESULTS: SC-EW03-TX-001**  
***Hyallela azteca* 96-Hour Static Acute**

LC<sub>50</sub> = 100%  
 Statistical analysis method: Spearman-Karber

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )
Control	100.0	8.51	855	7.7 (7.5-7.9)	24.6 (24.2-25.0)	200	200
6.25	100.0	8.55	844	7.9 (7.7-8.0)	24.9 (24.8-25.0)		
12.5	95.0	8.53	817	7.6 (7.1-8.0)	24.7 (24.5-24.8)		
25	97.5	8.53	751	7.9 (7.1-8.0)	24.8 (24.5-25.0)		
50	70.0	8.55	591	7.9 (7.8-8.0)	24.6 (24.2-24.9)		
100	75.0	8.54	432	7.9 (7.7-8.1)	24.8 (24.5-25.0)	200	220

**SURFACE WATER SAMPLE ARRIVAL INFORMATION**

**Collection Date/Time:** 10/25/94

**Use Date/Time:** 11/14/94

**Method of Shipment:** Overnight Courier

**Temperature (°C):** 2.5

**pH:** 8.40

**Ammonia (mg/L):** <0.01

**Conductivity (umhos/cm):** 409

**DO (mg/L):** 7.9

**TEST SUMMARY: SC-EW03-TX-001**  
***Hyalella azteca* Chronic Sediment**

---

Test protocol:	WCC SOP E7
Test organism:	<i>Hyalella azteca</i>
Source:	WCC
Age of test organism:	Second instar
Test initiation:	1/12/94
Test termination:	2/9/95
Temperature:	25 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	500 mL glass beaker
Sediment Test volume:	100 cm <sup>3</sup>
Organisms/replicate:	10
Replicates/concentration:	3
Feeding regime:	YTC/leaf slurry/algae
Aeration during test:	none
Dilution Water:	Spring Water
Test duration:	28 days
Effect measured:	Survival, growth, and reproduction

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**TEST RESULTS : SC- EW03-TX-001**  
***Hyalella azteca* Chronic Survival and Growth Test**

**Survival NOEC:** 50%  
 Statistical analysis method: Kruskal-Wallis  
 Normality test: Pass  
 Homogeneity of variance test: Fail  
**Growth NOEC:** 25%  
 Statistical analysis method:  
 Normality test:  
 Homogeneity of variance test:

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Gravel	90.0	7.58-8.28	573	6.5	23.9
Control			(228-917)	(5.0-8.0)	(21.8-26.0)
6.25	80.0	7.82-8.47	437	6.0	24.0
			(210-664)	(4.2-7.2)	(21.5-26.5)
12.5	90.0	7.96-8.55	458	6.5	24.0
			(308-608)	(4.2-8.8)	(22.0-26.0)
25	86.7	7.93-8.59	441.5	6.3	23.9
			(298-585)	(4.7-7.9)	(21.2-26.5)
50	76.7	7.93-8.58	443	5.7	24.0
			(310-576)	(3.5-7.9)	(21.5-26.5)
100	20.0	7.92-8.65	363	6.3	23.9
			(309-417)	(4.8-7.8)	(21.8-26.0)



**TEST SUMMARY: CC-EC01-TX-001 94**  
***Ceriodaphnia dubia* 48-Hour Static Acute**

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Test protocol:	WCC -SOP 401.2
Test organism:	<i>Ceriodaphnia dubia</i>
Source:	WCC Culture Laboratory
Age of test organism:	<24 hours
Test initiation:	10/29/1994 @1600
Test termination:	10/31/1994 @ 1530
Temperature:	25 +/- 1
Light:	50-100foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	30 mL styrene
Test volume:	20 mL
Organisms/replicate:	5
Replicates/concentration:	4
Feeding regime:	none
Aeration during test:	none
Dilution Water:	Hard Reconstituted Synthetic
Test duration:	48 hours
Effect measured:	Mortality
Reference Toxicant Data:	
LC <sub>50</sub> (g/L NaCl):	2.46

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**TEST RESULTS: CC-EC01-TX-001 94**  
***Ceriodaphnia dubia* 48-Hour Static Acute**

LC<sub>50</sub>>100%

Statistical analysis method: N/A

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )
Control	100	8.24-8.45	671 (644-697)	8.3 (8.2-8.3)	25.2-25.4	220	130
6.25	100	8.21-8.44	645 (641-649)	8.5 (8.2-8.8)	25.2-25.4		
12.5	100	8.22-8.44	687 (664-710)	8.5 (8.2-8.7)	25.2-25.4		
25	100	8.21-8.41	755 (698-812)	8.4 (8.1-8.7)	25.2-25.4		
50	100	8.21-8.32	816 (772-860)	8.4 (8.1-8.7)	25.2-25.4		
100	100	8.12-8.21	852 (845-858)	8.4 (8.0-8.7)	25.2-25.4	220	150

**SURFACE WATER SAMPLE ARRIVAL INFORMATION**

<b>Collection Date/Time:</b>	10/28/94 @ 1000
<b>Use Date/Time:</b>	10/29/94 @ 1300
<b>Method of Shipment:</b>	Overnight Courier
<b>Temperature (°C):</b>	3
<b>pH:</b>	8.12
<b>Ammonia (mg/L):</b>	<40ppb
<b>Conductivity (umhos/cm):</b>	845
<b>DO (mg/L):</b>	8.7

**TEST SUMMARY: CC-EC01-TX-001 94**  
***Ceriodaphnia dubia* Chronic Renewal**

---

Test protocol:	WCC - SOP 501.1
Test organism:	<i>Ceriodaphnia dubia</i>
Source:	WCC Culture Laboratory
WCC Batch:	10/31/94 to 11/1/94
Age of test organism:	<24 hours
Test initiation:	11/01/94 @1300
Test termination:	11/07/94 @ 1700
Temperature:	25 +/- 1
Light:	50 - 100 footcandles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	30 mL styrene
Test volume:	20 mL
Organisms/replicate:	1
Replicates/concentration:	10
Feeding regime:	0.05 mL <i>Selenastrum</i> and 0.05 mL YTC daily
Aeration during test:	none
Dilution Water:	Hard Reconstituted Synthetic
Test duration:	7 days
Effect measured:	Survival and Reproduction
Toxicity test methods and procedures were followed in accordance with EPA 600/4-89/001	
Reference Toxicant Data:	
NOEC (g/L NaCl):	0.5

---

**TEST RESULTS: CC-EC01-TX-001 94**  
***Ceriodaphnia dubia* Chronic Survival and Reproduction Test**

**Survival NOEC:**

Statistical analysis method:	>100%
Normality test:	Steel's Many-One Rank
Homogeneity of variance test:	Fail

**Reproduction NOEC:**

Statistical analysis method:	<100%
Normality test:	Dunnett's
Homogeneity of variance test:	Pass

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Control	100	8.29-8.59	620 (538-702)	8.4 (8.1-8.7)	25.2 (24.9-25.4)
6.25	90	8.13-8.52	681 (590-772)	8.2 (7.8-8.6)	25.2 (24.9-25.4)
12.5	100	8.15-8.51	688 (600-776)	8.3 (7.9-8.6)	25.2 (24.9-25.4)
25	80	8.16-8.50	691 (604-778)	8.3 (7.9-8.7)	25.2 (24.9-25.4)
50	90	8.18-8.49	717 (397-837)	8.3 (7.9-8.7)	25.2 (24.9-25.4)
100	100	8.00-8.51	922 (867-977)	8.4 (7.9-8.8)	25.2 (24.9-25.4)

	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )	Ammonia (mg/L)
Control	220	130	<0.01
EC01	220	150	<40 ppb

## EFFLUENT ARRIVAL INFORMATION

Collection Dates and Times	Use Dates	Temperature (°C)	pH	Conductivity (umhos/cm)	DO (mg/L)	Description	Method of Shipment
10/28/94 @ 1000	10/29/94-11/07/94	3	8.12	845	8.7	Clear	Overnight Courier

**TEST SUMMARY: CC-EC01-TX-001 94**  
***Pimephales promelas* 48-Hour Static Acute**

---

Test protocol:	WCC - SOP 410.2
Test organism:	<i>Pimephales promelas</i>
Source:	Woodward-Clyde Consultants
Age of test organism:	6 days
Test initiation:	10/29/1994 @ 1300
Test termination:	10/31/1994 @ 1100
Temperature:	20 +/- 1
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	500 mL plastic beaker
Test volume:	250 mL
Organisms/replicate:	10
Replicates/concentration:	2
Feeding regime:	none
Aeration during test:	none
Dilution Water:	Hard Reconstituted Synthhetic
Test duration:	48 hours
Effect measured:	Mortality
Reference Toxicant Data:	
LC <sub>50</sub> (g/L NaCl):	6.52

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**TEST RESULTS: CC-EC01-TX-001 94**  
***Pimephales promelas* 48-Hour Static Acute**

LC<sub>50</sub>>100%

Statistical analysis method: N/A

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )	Ammonia (mg/L)
Control	100	8.24-8.45	671 (644-697)	8.3 (8.2-8.3)	25.2-25.4	220	130	<0.01
6.25	100	8.21-8.44	645 (641-649)	8.5 (8.2-8.8)	25.2-25.4			
12.5	100	8.22-8.44	687 (664-710)	8.5 (8.2-8.7)	25.2-25.4			
25	100	8.21-8.41	755 (698-812)	8.4 (8.1-8.7)	25.2-25.4			
50	100	8.21-8.32	816 (772-860)	8.4 (8.1-8.7)	25.2-25.4			
100	100	8.12-8.21	852 (845-858)	8.4 (8.0-8.7)	25.2-25.4	220	150	<40ppb

**SURFACE WATER SAMPLE ARRIVAL INFORMATION**

<b>Collection Date/Time:</b>	10/28/94 @ 1000
<b>Use Date/Time:</b>	10/29/94 @ 1300
<b>Method of Shipment:</b>	Overnight Courier
<b>Temperature (°C):</b>	3
<b>pH:</b>	8.12
<b>Ammonia (mg/L):</b>	<40ppb
<b>Conductivity (umhos/cm):</b>	845
<b>DO (mg/L):</b>	8.7
<b>Description:</b>	clear

**TEST SUMMARY: CC-EC01-TX-001 94**  
***Pimephales promelas* Chronic Renewal**

---

Test protocol:	WCC - SOP 510.1
Test organism:	<i>Pimephales promelas</i>
Source:	Enviromental Consulting & Testing
Age of test organism:	< 24 hours
Test initiation:	11/1/1994 @ 1700
Test termination:	11/7/1994 @ 1425
Temperature:	25 +/- 1
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	500 mL plastic beaker
Test volume:	250 mL
Organisms/replicate:	10
Replicates/concentration:	4
Feeding regime:	0.1 mL brine shrimp nauplii twice daily
Aeration during test:	none
Dilution Water:	Spring
Test duration:	7 days
Effect measured:	Survival and growth
Toxicity test methods and procedures were followed in accordance with EPA 600/4-89/001	
Reference Toxicant Data:	
NOEC (g/L NaCl):	3

---

**TEST RESULTS: CC-EC01-TX-001 94**  
***Pimephales promelas* Chronic Survival and Growth Test**

**Survival NOEC:**

Statistical analysis method:	>100%
Normality test:	Steel's Many-One Rank
Homogeneity of variance test:	Fail

**Growth NOEC:**

Statistical analysis method:	<100%
Normality test:	Dunnett's
Homogeneity of variance test:	Pass

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Control	100	7.95-8.5	343 (296-399)	8.1 (7.8-8.7)	25.2 (24.9-25.4)
6.25	92.5	8.31-8.70	412 (372-452)	8 (7.3-8.7)	25.2 (24.9-25.4)
12.5	95	8.19-8.65	445 (406-484)	7.9 (7.1-8.7)	25.2 (24.9-25.4)
25	97.5	8.20-8.58	515 (468-561)	7.9 (7.0-8.7)	25.2 (24.9-25.4)
50	100	8.16-8.55	633 (557-708)	7.9 (7.1-8.7)	25.2 (24.9-25.4)
100	95	8.08-8.43	897 (763-1030)	7.9 (7.1-8.7)	25.2 (24.9-25.4)

CC-EC01-TX-001 94:	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )	Ammonia (mg/L)
	220	150	<40 ppb

**TEST SUMMARY: CC-EC02-TX-001 94**  
***Ceriodaphnia dubia* 48-Hour Static Acute**

---

Test protocol:	WCC - SOP 401.2
Test organism:	<i>Ceriodaphnia dubia</i>
Source:	WCC Culture Laboratory
Age of test organism:	<24 hours
Test initiation:	10/29/1994 @ 1620
Test termination:	10/31/1994 @ 1530
Temperature:	25 +/- 1
Light:	50-100foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	30 mL styrene
Test volume:	20 mL
Organisms/replicate:	5
Replicates/concentration:	4
Feeding regime:	none
Aeration during test:	none
Dilution Water:	Hard Reconstituted Synthetic
Test duration:	48 hours
Effect measured:	Mortality

---

Reference Toxicant Data:  
LC<sub>50</sub> (g/L NaCl): 2.46

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**TEST RESULTS: CC-EC02-TX-001 94**  
***Ceriodaphnia dubia* 48-Hour Static Acute**

LC<sub>50</sub>>100%

Statistical analysis method: N/A

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )
Control	100	8.24-8.45	671 (644-697)	8.3 (8.2-8.3)	25.2-25.4	220	130
6.25	95	8.15-8.38	717 (667-767)	8.4 (8.1-8.6)	25.2-25.4		
12.5	100	8.14-8.42	730 (682-777)	8.4 (8.2-8.6)	25.2-25.4		
25	100	8.13-8.40	711 (699-723)	8.4 (8.1-8.6)	25.2-25.4		
50	100	8.13-8.34	791 (778-804)	8.4 (8.0-8.7)	25.2-25.4		
100	100	8.14-8.18	979 (815-1143)	8.4 (8.0-8.7)	25.2-25.4	240	130

**SURFACE WATER SAMPLE ARRIVAL INFORMATION**

**Collection Date/Time:** 10/28/94 @ 0900

**Use Date/Time:** 10/29/94 @ 1300

**Method of Shipment:** Overnight Courier

**Temperature (°C):** 3

**pH:** 8.18

**Ammonia (mg/L):** <40ppb

**Conductivity (umhos/cm):** 815

**DO (mg/L):** 8.7

**TEST SUMMARY: CC-EC02-TX-001 94**  
***Ceriodaphnia dubia* Chronic Renewal**

---

Test protocol:	WCC - SOP 501.1
Test organism:	<i>Ceriodaphnia dubia</i>
Source:	WCC Culture Laboratory
WCC Batch:	10/31/94 TO 11/1/94
Age of test organism:	<24 hours
Test initiation:	11/01/94 @1530
Test termination:	11/07/94 @ 1710
Temperature:	25 +/- 1
Light:	50 - 100 footcandles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	30 mL styrene
Test volume:	20 mL
Organisms/replicate:	1
Replicates/concentration:	10
Feeding regime:	0.05 mL <i>Selenastrum</i> and 0.05 mL YTC daily
Aeration during test:	none
Dilution Water:	Hard Reconstituted Synthetic
Test duration:	7 days
Effect measured:	Survival and Reproduction
Toxicity test methods and procedures were followed in accordance with EPA 600/4-89/001	
Reference Toxicant Data:	
NOEC (g/L NaCl):	0.5

---

**TEST RESULTS: CC-EC02-TX-001 94**  
***Ceriodaphnia dubia* Chronic Survival and Reproduction Test**

**Survival NOEC:**

Statistical analysis method:	>100%
Normality test:	Steel's Many-One Rank
Homogeneity of variance test:	Fail

**Reproduction NOEC:**

Statistical analysis method:	<100%
Normality test:	Dunnett's
Homogeneity of variance test:	Pass

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Control	100	8.29-8.59	620 (538-702)	8.4 (8.1-8.7)	25.2 (24.9-25.4)
6.25	90	8.07-8.51	697 (580-814)	8.3 (7.9-8.6)	25.2 (24.9-25.4)
12.5	90	8.06-8.50	628 (505-750)	8.3 (7.9-8.6)	25.2 (24.9-25.4)
25	100	8.05-8.49	655 (505-805)	8.3 (7.9-8.6)	25.2 (24.9-25.4)
50	100	8.08-8.56	772 (581-962)	8.3 (7.9-8.6)	25.2 (24.9-25.4)
100	100	7.99-8.46	888 (726-1050)	8.5 (7.9-9.1)	25.2 (24.9-25.4)

Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )	Ammonia (mg/L)
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Control	220	130	<0.01
EC02	240	130	<40 ppb

## EFFLUENT ARRIVAL INFORMATION

Collection Dates and Times	Use Dates	Temperature (°C)	pH	Conductivity (umhos/cm)	DO (mg/L)	Description	Method of Shipment
10/28/94 @ 0900	10/29/94-11/07/94	3	8.18	815	8.7	Clear	Overnight Courier

**TEST SUMMARY: CC-EC02-TX-001 94**  
***Pimephales promelas* 48-Hour Static Acute**

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Test protocol:	WCC - SOP 410.2
Test organism:	<i>Pimephales promelas</i>
Source:	Woodward-Clyde Consultants
Age of test organism:	6 days
Test initiation:	10/29/1994 @ 1300
Test termination:	10/31/1994 @ 1130
Temperature:	20 +/- 1
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	500 mL plastic beaker
Test volume:	250 mL
Organisms/replicate:	10
Replicates/concentration:	2
Feeding regime:	none
Aeration during test:	none
Dilution Water:	Hard Reconstituted Synthhetic
Test duration:	48 hours
Effect measured:	Mortality
Reference Toxicant Data:	
LC <sub>50</sub> (g/L NaCl):	6.52

---

**TEST RESULTS: CC-EC02-TX-001 94**  
***Pimephales promelas* 48-Hour Static Acute**

LC<sub>50</sub>>100%  
 Statistical analysis method: N/A

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )	Ammonia (mg/L)
Control	100	8.24-8.45	671 (644-697)	8.3 (8.2-8.3)	25.2-25.4	220	130	<0.01
6.25	100	8.15-8.38	717 (667-767)	8.4 (8.1-8.6)	25.2-25.4			
12.5	100	8.14-8.42	730 (682-777)	8.4 (8.2-8.6)	25.2-25.4			
25	100	8.13-8.40	711 (699-723)	8.4 (8.1-8.6)	25.2-25.4			
50	100	8.13-8.34	791 (778-804)	8.4 (8.0-8.7)	25.2-25.4			
100	100	8.14-8.18	979 (815-1143)	8.4 (8.0-8.7)	25.2-25.4	240	130	<40ppb

**SURFACE WATER SAMPLE ARRIVAL INFORMATION**

**Collection Date/Time:** 10/28/94 @ 0900  
**Use Date/Time:** 10/29/94 @ 1300  
**Method of Shipment:** Overnight Courier  
**Temperature (°C):** 3  
**pH:** 8.18  
**Ammonia (mg/L):** <40ppb  
**Conductivity (umhos/cm):** 815  
**DO (mg/L):** 8.7  
**Description:** clear

**TEST SUMMARY: CC-EC02-TX-001 94**  
***Pimephales promelas* Chronic Renewal**

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Test protocol:	WCC - SOP 510.1
Test organism:	<i>Pimephales promelas</i>
Source:	Enviromental Consulting & Testing
Age of test organism:	< 24 hours
Test initiation:	11/1/1994 @ 1700
Test termination:	11/7/1994 @ 1515
Temperature:	25 +/- 1
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	500 mL plastic beaker
Test volume:	250 mL
Organisms/replicate:	10
Replicates/concentration:	4
Feeding regime:	0.1 mL brine shrimp nauplii twice daily
Aeration during test:	none
Dilution Water:	Spring
Test duration:	7 days
Effect measured:	Survival and growth
Toxicity test methods and procedures were followed in accordance with EPA 600/4-89/001	
Reference Toxicant Data:	
NOEC (g/L NaCl):	3

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**TEST RESULTS: CC-EC02-TX-001 94**  
***Pimephales promelas* Chronic Survival and Growth Test**

<b>Survival NOEC:</b>	>100%
Statistical analysis method:	Steel's Many-One Rank
Normality test:	Fail
Homogeneity of variance test:	Fail
<b>Growth NOEC:</b>	100%
Statistical analysis method:	Dunnett's
Normality test:	Pass
Homogeneity of variance test:	Pass

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Control	100	7.95-8.5	343 (296-399)	8.1 (7.8-8.7)	25.2 (24.9-25.4)
6.25	100	8.18-8.64	436 (381-490)	8 (7.3-8.7)	25.2 (24.9-25.4)
12.5	100	8.19-8.65	472 (432-511)	8.1 (7.4-8.7)	25.2 (24.9-25.4)
25	97.5	8.18-8.60	543 (496-590)	8.4 (7.1-8.6)	25.2 (24.9-25.4)
50	97.5	8.15-8.54	717 (667-766)	8.4 (7.1-8.6)	25.2 (24.9-25.4)
100	97.5	8.09-8.47	1018 (930-1105)	8.1 (7.1-9.0)	25.2 (24.9-25.4)

CC-EC02-TX-001 94:	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )	Ammonia (mg/L)
	240	130	<40 ppb

**TEST SUMMARY: SC-EE01-TX-001 94**  
***Ceriodaphnia dubia* 48-Hour Static Acute**

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Test protocol:	WCC - SOP 401.2
Test organism:	<i>Ceriodaphnia dubia</i>
Source:	WCC Culture Laboratory
Age of test organism:	<24 hours
Test initiation:	10/29/1994 @ 1630
Test termination:	11/1/1994 @ 1530
Temperature:	25 +/- 1
Light:	50-100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	30 mL styrene
Test volume:	20 mL
Organisms/replicate:	5
Replicates/concentration:	4
Feeding regime:	none
Aeration during test:	none
Dilution Water:	Hard Reconstituted Synthetic
Test duration:	48 hours
Effect measured:	Mortality
Reference Toxicant Data:	
LC <sub>50</sub> (g/L NaCl):	2.46

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**TEST RESULTS: SC-EE01-TX-001 94**  
***Ceriodaphnia dubia* 48-Hour Static Acute**

$LC_{50} = 45.55\%$

Statistical analysis method: Spearman-Karber

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )
Control	100	8.24-8.45	671 (644-697)	8.3 (8.2-8.3)	25.2-25.4	220	130
6.25	100	8.24-8.45	665 (633-697)	8.4 (8.2-8.5)	25.2-25.4		
12.5	100	8.24-8.48	645 (608-681)	8.4 (8.2-8.5)	25.2-25.4		
25	100	8.27-8.47	613 (578-647)	8.4 (8.2-8.6)	25.2-25.4		
50	35	8.27-8.45	551 (522-580)	8.3 (8.0-8.6)	25.2-25.4		
100	10	8.39-8.33	488 (408-558)	8.4 (8.1-8.7)	25.2-25.4	200	200

**SURFACE WATER SAMPLE ARRIVAL INFORMATION**

**Collection Date/Time:** 10/28/94 @ 1400

**Use Date/Time:** 10/29/94 @1700

**Method of Shipment:** Overnight courier

**Temperature (°C):** 2.0 C

**pH:** 8.39

**Ammonia (mg/L):** <40ppb

**Conductivity (umhos/cm):** 408

**DO (mg/L):** 8.7

**TEST SUMMARY: SC-EE01-TX-001 94**  
***Ceriodaphnia dubia* Chronic Renewal**

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Test protocol:	WCC - SOP 501.1
Test organism:	<i>Ceriodaphnia dubia</i>
Source:	WCC Culture Laboratory
WCC Batch:	10/28/94 to 10/29/94
Age of test organism:	<24 hours
Test initiation:	10/29/1994 @ 1530
Test termination:	11/1/1994 @ 1655
Temperature:	25 +/- 1
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	30 mL styrene
Test volume:	20 mL
Organisms/replicate:	1
Replicates/concentration:	10
Feeding regime:	0.05 mL <i>Selenastrum</i> and 0.05 mL YTC daily
Aeration during test:	none
Dilution Water:	Hard Reconstituted Synthetic
Test duration:	7 days
Effect measured:	Survival and Reproduction
Toxicity test methods and procedures were followed in accordance with EPA 600/4-89/001	
Reference Toxicant Data:	
NOEC (g/L NaCl):	0.5

---

**TEST RESULTS: SC - EE01-TX-001 94**  
***Ceriodaphnia dubia* Chronic Survival and Reproduction Test**

**Survival NOEC:**

Statistical analysis method:	>100%
Normality test:	Steel's Many-One Rank
Homogeneity of variance test:	Fail

**Reproduction NOEC:**

Statistical analysis method:	Dunnett's
Normality test:	Pass
Homogeneity of variance test:	Pass

6.25%

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Control	100	8.05-8.56	633 (568-698)	8.3 (7.9-8.6)	24.7 (24.0-25.4)
3.625	100	8.14-8.56	611 (535-686)	8.2 (7.8-8.5)	24.7 (24.0-25.4)
6.25	100	8.14-8.55	610 (423-797)	8.2 (7.8-8.5)	24.7 (24.0-25.4)
12.5	95	8.15-8.58	600 (431-769)	8.2 (7.8-8.5)	24.7 (24.0-25.4)
25	95	8.14-8.58	616 (513-718)	8.2 (7.8-8.6)	24.7 (24.0-25.4)
50	95	8.14-8.59	551 (483-619)	8.2 (7.8-8.6)	24.7 (24.0-25.4)

	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )	Ammonia (mg/L)
Control	220	130	<0.01
EE01	200	200	<40 ppb

## EFFLUENT ARRIVAL INFORMATION

Collection Dates and Times	Use Dates	Temperature (°C)	pH	Conductivity (umhos/cm)	DO (mg/L)	Description	Method of Shipment
10/28/94	10/29/94-11/08/94	2	8.39	408	8.7	Clear	Overnight Courier
10/31/03							

**TEST SUMMARY: SC-EE01-TX-001 94**  
***Pimephales promelas* 48-Hour Static Acute**

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Test protocol:	WCC - SOP 410.2
Test organism:	<i>Pimephales promelas</i>
Source:	Woodward-Clyde Consultants
Age of test organism:	6 days
Test initiation:	10/29/1994 @ 1300
Test termination:	11/1/1994 @ 1100
Temperature:	20 +/- 1
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	500 mL plastic beaker
Test volume:	250 mL
Organisms/replicate:	10
Replicates/concentration:	2
Feeding regime:	none
Aeration during test:	none
Dilution Water:	Hard Reconstituted Synthetic
Test duration:	48 hours
Effect measured:	Mortality
Reference Toxicant Data:	
LC <sub>50</sub> (g/L NaCl):	6.52

---

**TEST RESULTS: SC- EE01-TX-001 94**  
***Pimephales promelas* 48-Hour Static Acute**

LC<sub>50</sub>>100%

Statistical analysis method: N/A

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )	Ammonia (mg/L)
Control	100	8.24-8.45	671 (644-697)	8.3 (8.2-8.3)	25.2-25.4	220	130	<0.01
6.25	100	8.24-8.45	665 (633-697)	8.4 (8.2-8.5)	25.2-25.4			
12.5	100	8.24-8.48	645 (608-681)	8.4 (8.2-8.5)	25.2-25.4			
25	100	8.27-8.47	613 (578-647)	8.4 (8.2-8.6)	25.2-25.4			
50	100	8.27-8.45	551 (522-580)	8.3 (8.0-8.6)	25.2-25.4			
100	100	8.39-8.33	488 (408-558)	8.4 (8.1-8.7)	25.2-25.4	200	200	<40ppb

**SURFACE WATER SAMPLE ARRIVAL INFORMATION**

**Collection Date/Time:** 10/28/94 @1400

**Use Date/Time:** 10/29/94 @ 1700

**Method of Shipment:** Overnight courier

**Temperature (°C):** 2

**pH:** 8.39

**Ammonia (mg/L):** <40ppb

**Conductivity (umhos/cm):** 408

**DO (mg/L):** 8.7

**Description:** clear

**TEST SUMMARY: SC-EE01-TX-001 94**  
***Pimephales promelas* Chronic Renewal**

---

Test protocol:	WCC - SOP 510.1
Test organism:	<i>Pimephales promelas</i>
Source:	Enviromental Consulting & Testing
Age of test organism:	< 24 hours
Test initiation:	11/01/94 @1800
Test termination:	11/08/94 @1140
Temperature:	25 +/- 1
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	500 mL plastic beaker
Test volume:	250 mL
Organisms/replicate:	10
Replicates/concentration:	4
Feeding regime:	0.1 mL brine shrimp nauplii twice daily
Aeration during test:	none
Dilution Water:	Hard Reconstituted Synthetic
Test duration:	7 days
Effect measured:	Survival and growth
Toxicity test methods and procedures were followed in accordance with EPA 600/4-89/001	
Reference Toxicant Data: NOEC (g/L NaCl):	3

---

**TEST RESULTS: SC- EE01-TX-001 94**  
***Pimephales promelas* Chronic Survival and Growth Test**

**Survival NOEC:**

Statistical analysis method:	>100%
Normality test:	Steel's Many-One Rank
Homogeneity of variance test:	Fail

**Growth NOEC:**

Statistical analysis method:	100%
Normality test:	Dunnett's
Homogeneity of variance test:	Pass

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Control	100	8.19-8.70	350 (284-416)	7.6 (6.4-8.7)	24.9 (24.2-25.5)
6.25	100	8.22-8.68	365 (314-416)	7.5 (6.4-8.6)	24.9 (24.2-25.5)
12.5	100	8.23-8.67	382 (348-416)	7.6 (6.5-8.6)	24.9 (24.2-25.5)
25	100	8.23-8.68	381 (334-428)	7.6 (6.5-8.6)	24.9 (24.2-25.5)
50	100	8.25-8.62	374 (314-433)	7.6 (6.5-8.6)	24.9 (24.2-25.5)
100	97.5	8.31-8.61	379 (307-450)	7.6 (6.5-8.7)	24.9 (24.2-25.5)

SC-EE01-TX-001 94:	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )	Ammonia (mg/L)
	200	200	<40ppb

**TEST SUMMARY: SC-EE02-TX-001 94**  
***Ceriodaphnia dubia* 48-Hour Static Acute**

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Test protocol: WCC - SOP 401.2  
Test organism: Ceriodaphnia dubia  
Source: WCC Culture Laboratory  
Age of test organism: < 24 hours  
Test initiation: 10/28/1994 @ 1530  
Test termination: 10/30/1994 @ 1200  
Temperature: 25 +/- 1 °C  
Light: 50-100 foot candles  
Photoperiod: 16 hours light/ 8 hours dark  
Test vessel: 30 mL styrene  
Test volume: 20 mL  
Organisms/replicate: 5  
Replicates/concentration: 4  
Feeding regime: none  
Aeration during test: none  
Dilution Water: Very hard Reconstituted Synthetic  
Test duration: 48 hours  
Effect measured: Mortality

Reference Toxicant Data:

LC<sub>50</sub> (mg/L NaCl): 2.46

---

**TEST RESULTS: SC-EE02-TX-001 94**  
***Ceriodaphnia dubia* 48-Hour Static Acute**

$LC_{50} = 11.1\%$

Statistical analysis method: Spearman-Karber

Treatment (% Effluent)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )
Control	100	8.43-8.63	1076 (1008-1143)	8.3 (8.0-8.6)	25.2-25.4	390	240
6.25	85	8.50-8.58	1153 (1133-1173)	8.4 (8.2-8.5)	25.2-25.4		
12.5	45	8.62	1136 (1098-1173)	8.4 (8.1-8.7)	25.2-25.4		
25	5	8.62-8.63	1088 (1030-1146)	8.4 (8.1-8.6)	25.2-25.4		
50	0	8.60-8.62	938 (775-1101)	8.4 (8.1-8.7)	25.2-25.4		
100	0	8.56-8.57	845 (828-861)	8.4 (8.0-8.7)	25.2-25.4	390	190

**EFFLUENT ARRIVAL INFORMATION**

<b>Collection Date/Time:</b>	10/27/94 @ 1430
<b>Use Date/Time:</b>	10/28/94 @ 1530
<b>Method of Shipment:</b>	Overnight Courier
<b>Temperature (°C):</b>	2.5
<b>pH:</b>	8.57
<b>TRC (mg/L):</b>	<40 ppb
<b>Conductivity (umhos/cm):</b>	861
<b>DO (mg/L):</b>	8.7
<b>Description:</b>	Clear

**TEST SUMMARY: SC-EE02-TX-001 94**  
***Ceriodaphnia dubia* Chronic Renewal**

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Test protocol:	WCC- SOP 501.1
Test organism:	<i>Ceriodaphnia dubia</i>
Source:	WCC Culture Laboratory
WCC Batch:	10/31/94 to 11/7/94
Age of test organism:	< 24 hours
Test initiation:	10/31/1994 @ 1600
Test termination:	11/7/1994 @ 1430
Temperature:	25 +/- 1 0C
Light:	50-100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	30 mL styrene
Test volume:	20 mL
Organisms/replicate:	1
Replicates/concentration:	10
Feeding regime:	0.05 mL <i>Selenastrum</i> and 0.05 mL YTC daily
Aeration during test:	none
Dilution Water:	Very hard Reconstituted Synthetic
Test duration:	7 days
Effect measured:	Survival and Reproduction

Toxicity test methods and procedures were followed in accordance with EPA 600/4-89/001

Reference Toxicant Data:  
NOEC (g/L NaCl): 0.5

---

**TEST RESULTS: SC-EE02-TX-001 94**  
***Ceriodaphnia dubia* Chronic Survival and Reproduction Test**

**Survival NOEC:**

Statistical analysis method:	>100%
Normality test:	Steel's Many-One Rank
Homogeneity of variance test:	Fail

**Reproduction NOEC:**

Statistical analysis method:	>100%
Normality test:	Dunnett's
Homogeneity of variance test:	Pass

Treatment (% Effluent)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Control	100	8.34-8.64	824 (490-1158)	8.3 (7.8-8.7)	25.1 (24.9-25.6)
0.625	80	8.21-8.62	925 (662-1188)	8.3 (7.9-8.7)	25.1 (24.9-25.6)
1.25	70	8.22-8.61	906 (671-1141)	8.3 (7.9-8.6)	25.1 (24.9-25.6)
2.5	90	8.22-8.62	938 (676-1199)	8.3 (7.9-8.7)	25.1 (24.9-25.6)
5	60	8.24-8.63	933 (677-1189)	8.3 (7.9-8.7)	25.1 (24.9-25.6)
10	60	8.23-8.61	939 (699-1179)	8.3 (7.8-8.7)	25.1 (24.9-25.6)

	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )	TRC (mg/L)
Control	390	240	<0.01
EEO2	390	190	<40PPB

## EFFLUENT ARRIVAL INFORMATION

### *Ceriodaphnia dubia*

Collection Dates and Times	Use Dates	Temperature (°C)	pH	Conductivity (umhos/cm)	DO (mg/L)	Description	Method of Shipment
10/27/94 @ 1430	10/28/94-11/07/94	3	8.57	861	8.7	Clear	Overnight Courier

**TEST SUMMARY: SC-EE02-TX-001 94**  
***Pimephales promelas* 48-Hour Static Acute**

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Test protocol:	WCC - SOP 410.2
Test organism:	<i>Pimephales promelas</i>
Source:	Woodward-Clyde Consultants
Age of test organism:	6 days
Test initiation:	10/31/1994 @ 1600
Test termination:	11/7/1994 @ 1200
Temperature:	20 +/- 1 °C
Light:	50-100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	500mL
Test volume:	250 mL
Organisms/replicate:	10
Replicates/concentration:	2
Feeding regime:	none
Aeration during test:	none
Dilution Water:	Very Hard Reconstituted Synthetic
Test duration:	48 hours
Effect measured:	Mortality
Reference Toxicant Data:	
LC <sub>50</sub> (g/L NaCl):	6.52

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**TEST RESULTS: SC-EEO2-TX-001 94**  
***Pimephales promelas* 48-Hour Static Acute**

LC<sub>50</sub>>100%

Statistical analysis method: N/A

Treatment (% Effluent)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )	TRC (mg/L)
Control	100	8.62-8.63	1167 (1143-1191)	8.5 (8.3-8.6)	25.3 (25.2-25.4)	390	240	<0.01
6.25	100	8.62-8.63	1191 (1188-1193)	8.6 (8.4-8.7)	25.3 (25.2-25.4)			
12.5	100	8.63-8.64	1169 (1146-1191)	8.5 (8.4-8.6)	25.3 (25.2-25.4)			
25	100	8.62-8.63	1093 (1084-1101)	8.6 (8.4-8.7)]	25.3 (25.2-25.4)			
50	100	8.57-8.59	1048 (1016-1080)	8.5 (8.3-8.7)	25.3 (25.2-25.4)			
100	100	8.51-8.59	871 (861-880)	8.6 (8.4-8.7)	25.3 (25.2-25.4)	390	190	<40ppb

**EFFLUENT ARRIVAL INFORMATION**

<b>Collection Date/Time:</b>	10/27/94 @1430
<b>Use Date/Time:</b>	10/28/94 @1600
<b>Method of Shipment:</b>	Overnight Courier
<b>Temperature (°C):</b>	3
<b>pH:</b>	8.51
<b>TRC (mg/L):</b>	<40ppb
<b>Conductivity (umhos/cm):</b>	861
<b>DO (mg/L):</b>	8.7
<b>Description:</b>	Clear

**TEST SUMMARY:SC-EE02-TX-001 94**  
***Pimephales promelas* Chronic Renewal**

---

Test protocol:	WCC - SOP 510.1
Test organism:	<i>Pimephales promelas</i>
Source:	Enviromental Consulting & Testing
Age of test organism:	<24 hours
Test initiation:	10/31/94 @ 1820
Test termination:	11/07/94 @ 1330
Temperature:	25 +/- 1 °C
Light:	50-100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	500 mL plastic beaker
Test volume:	250 mL
Organisms/replicate:	10
Replicates/concentration:	4
Feeding regime:	0.1 mL brine shrimp nauplii twice daily
Aeration during test:	none
Dilution Water:	Very Hard Reconstituted Synthetic
Test duration:	7 days
Effect measured:	Survival and Growth
Toxicity test methods and procedures were followed in accordance with EPA 600/4-89/001	
Reference Toxicant Data:	
NOEC (g/L NaCl):	3

---

**TEST RESULTS: SC-EE02-TX-001 94**  
***Pimephales promelas* Chronic Survival and Reproduction Test**

<b>Survival NOEC:</b>	>100%
Statistical analysis method:	Steel's Many-One Rank
Normality test:	Fail
Homogeneity of variance test:	Fail
<b>Reproduction NOEC:</b>	>100%
Statistical analysis method:	Dunnett's
Normality test:	Pass
Homogeneity of variance test:	Pass

Treatment (% Effluent)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Control	100	8.06-8.63	935 (667-1202)	8.0 (7.7-8.7)	25.2 (24.8-25.6)
6.25	100	8.02-8.63	932 (676-1188)	8 (7.0-8.9)	25.2 (24.8-25.6)
12.5	100	8.03-8.61	908 (691-1125)	7.8 (6.9-8.7)	25.2 (24.8-25.6)
25	100	8.06-8.65	947 (707-1187)	7.8 (6.9-8.7)	25.2 (24.8-25.6)
50	97.5	8.07-8.61	954 (743-1165)	7.8 (6.9-8.7)	25.2 (24.8-25.6)
100	97.5	8.27-8.65	966 (765-1166)	7.9 (6.9-8.9)	25.2 (24.8-25.6)

SC-EE02-TX-001 94	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )	TRC (mg/L)
	390	190	<40PPB

**TEST SUMMARY: SC-EE03-TX-001 94**  
***Ceriodaphnia dubia* 48-Hour Static Acute**

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Test protocol:	WCC - SOP 401.2
Test organism:	<i>Ceriodaphnia dubia</i>
Source:	WCC Culture Laboratory
Age of test organism:	<24 hours
Test initiation:	10/28/1994 @ 1530
Test termination:	10/31/1994 @ 1215
Temperature:	25 +/- 1
Light:	50-100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	30 mL styrene
Test volume:	20 mL
Organisms/replicate:	5
Replicates/concentration:	4
Feeding regime:	none
Aeration during test:	none
Dilution Water:	Hard Reconstituted Synthetic
Test duration:	48 hours
Effect measured:	Mortality
Reference Toxicant Data:	
LC <sub>50</sub> (g/L NaCl):	2.46

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**TEST RESULTS: SC-EE03-TX-001 94**  
***Ceriodaphnia dubia* 48-Hour Static Acute**

$LC_{50} = 34.9$

Statistical analysis method: Spearman-Karber

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )
Control	100	8.43-8.63	1076 (1008-1143)	8.3 (8.0-8.6)	25.2-25.4	220	240
6.25	100	8.49-8.53	665 (655-674)	8.4 (8.0-8.7)	25.2-25.4		
12.5	95	8.51-8.53	677 (660-694)	8.4 (8.0-8.7)	25.2-25.4		
25	75	8.52-8.53	632 (626-638)	8.4 (8.0-8.8)	25.2-25.4		
50	30	8.52-8.55	631 (613-648)	8.4 (8.0-8.8)	25.2-25.4		
100	0	8.51-8.61	608 (580-635)	8.4 (8.0-8.8)	25.2-25.4	130	200

**SURFACE WATER SAMPLE ARRIVAL INFORMATION**

<b>Collection Date/Time:</b>	10/27/94 @1130
<b>Use Date/Time:</b>	10/28/94 @1530
<b>Method of Shipment:</b>	Overnight Courier
<b>Temperature (°C):</b>	1
<b>pH:</b>	8.51
<b>Ammonia (mg/L):</b>	<40 ppb
<b>Conductivity (umhos/cm):</b>	580
<b>DO (mg/L):</b>	8.8

**TEST SUMMARY: SC-EE03-TX-001 94**  
***Ceriodaphnia dubia* Chronic Renewal**

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Test protocol:	WCC - SOP 501.1
Test organism:	<i>Ceriodaphnia dubia</i>
Source:	WCC Culture Laboratory
WCC Batch:	10/30/94 to 10/31/94
Age of test organism:	<24 hours
Test initiation:	10/31/1994 @ 1615
Test termination:	11/8/1994 @ 1630
Temperature:	25 +/- 1°C
Light:	50 - 100 footcandles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	30 mL styrene
Test volume:	20 mL
Organisms/replicate:	1
Replicates/concentration:	10
Feeding regime:	0.05 mL <i>Selenastrum</i> and 0.05 mL YTC daily
Aeration during test:	none
Dilution Water:	Hard Reconstituted Synthetic
Test duration:	7 days
Effect measured:	Survival and Reproduction
Toxicity test methods and procedures were followed in accordance with EPA 600/4-89/001	
Reference Toxicant Data:	
NOEC (g/L NaCl):	0.5

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**TEST RESULTS: SC - EE03-TX-001 94**  
***Ceriodaphnia dubia* Chronic Survival and Reproduction Test**

**Survival NOEC:**

Statistical analysis method: >100%

Normality test: Steel's

Homogeneity of variance test: Fail

**Reproduction NOEC:**

Statistical analysis method: 6.25%

Normality test: Dunnett's

Homogeneity of variance test: Pass

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Control	100	8.25-8.65	534 (380-688)	8.2 (7.7-8.7)	25.2 (25.0-25.4)
1.375	100	8.24-8.57	603 (518-688)	8.2 (7.7-8.6)	25.2 (25.0-25.4)
3.75	100	8.26-8.53	602 (522-682)	8.2 (7.7-8.6)	25.2 (25.0-25.4)
7.5	90	8.27-8.54	565 (452-678)	8.2 (7.7-8.6)	25.2 (25.0-25.4)
15	100	8.30-8.54	574 (472-675)	8.2 (7.8-8.6)	25.2 (25.0-25.4)
30	80	8.30-8.54	612 (564-660)	8.3 (7.8-8.7)	25.2 (25.0-25.4)

	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )	Ammonia (mg/L)
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Control	220	130	<0.01
EE03	240	200	<4 ppb

## EFFLUENT ARRIVAL INFORMATION

Collection Dates and Times	Use Dates	Temperature (°C)	pH	Conductivity (umhos/cm)	DO (mg/L)	Description	Method of Shipment
10/27/94 @1130	10/28/94-11/08/94	3.5	8.51	580	8.8	Clear	Overnight Courier

**TEST SUMMARY: SC-EE03-TX-001 94**  
***Pimephales promelas* 48-Hour Static Acute**

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Test protocol:	WCC - SOP 410.2
Test organism:	<i>Pimephales promelas</i>
Source:	Woodward-Clyde Consultants
Age of test organism:	6 days
Test initiation:	10/28/1994 @ 1600
Test termination:	10/31/1994 @ 1200
Temperature:	20 +/- 1°C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	500 mL plastic beaker
Test volume:	250 mL
Organisms/replicate:	10
Replicates/concentration:	2
Feeding regime:	none
Aeration during test:	none
Dilution Water:	Spring
Test duration:	48 hours
Effect measured:	Mortality
Reference Toxicant Data:	
LC <sub>50</sub> (g/L NaCl):	6.52

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**TEST RESULTS: SC- EE03-TX-001 94**  
***Pimephales promelas* 48-Hour Static Acute**

LC<sub>50</sub>>100%

Statistical analysis method: N/A

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )	Ammonia (mg/L)
Control	100	8.62-8.63	395 (380-409)	8.3 (8.2-8.4)	25.3 (25.2-25.4)	200	230	<0.01
6.25	100	8.53-8.59	413 (407-419)	8.6 (8.4-8.7)	25.3 (25.2-25.4)			
12.5	100	8.58-8.59	409 (403-415)	8.6 (8.4-8.7)	25.3 (25.2-25.4)			
25	100	8.58-8.60	426 (415-436)	8.6 (8.4-8.7)	25.3 (25.2-25.4)			
50	100	8.55-8.60	477 (460-494)	8.6 (8.4-8.8)	25.3 (25.2-25.4)			
100	90	8.51-8.61	588 (580-595)	8.6 (8.4-8.8)	25.3 (25.2-25.4)	240	200	<40ppb

**SURFACE WATER SAMPLE ARRIVAL INFORMATION**

<b>Collection Date/Time:</b>	10/27/94 @1130
<b>Use Date/Time:</b>	10/28/94 @1600
<b>Method of Shipment:</b>	Overnight courier
<b>Temperature (°C):</b>	3.5
<b>pH:</b>	8.51
<b>Ammonia (mg/L):</b>	<40ppb
<b>Conductivity (umhos/cm):</b>	580
<b>DO (mg/L):</b>	8.8
<b>Description:</b>	clear

**TEST SUMMARY: SC-EE03-TX-001 94**  
***Pimephales promelas* Chronic Renewal**

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<b>Test protocol:</b>	WCC - SOP 510.1
<b>Test organism:</b>	<i>Pimephales promelas</i>
<b>Source:</b>	Enviromental Consulting & Testing
<b>Age of test organism:</b>	< 24 hours
<b>Test initiation:</b>	10/31/94 @1830
<b>Test termination:</b>	11/07/94 @ 1430
<b>Temperature:</b>	25 +/- 1
<b>Light:</b>	50 - 100 foot candles
<b>Photoperiod:</b>	16 hours light/8 hours dark
<b>Test vessel:</b>	500 mL plastic beaker
<b>Test volume:</b>	250 mL
<b>Organisms/replicate:</b>	10
<b>Replicates/concentration:</b>	4
<b>Feeding regime:</b>	0.1 mL brine shrimp nauplii twice daily
<b>Aeration during test:</b>	none
<b>Dilution Water:</b>	Spring
<b>Test duration:</b>	7 days
<b>Effect measured:</b>	Survival and growth
Toxicity test methods and procedures were followed in accordance with EPA 600/4-89/001	
<b>Reference Toxicant Data:</b>	
NOEC (g/L NaCl):	3

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**TEST RESULTS: SC- EE03-TX-001 94**  
***Pimephales promelas* Chronic Survival and Growth Test**

<b>Survival NOEC:</b>	>100%
Statistical analysis method:	Steel's Many-One Rank
Normality test:	Fail
Homogeneity of variance test:	Fail
<b>Growth NOEC:</b>	50%
Statistical analysis method:	Dunnett's
Normality test:	Pass
Homogeneity of variance test:	Pass

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Control	97.5	8.23-8.68	496 (349-642)	8.2 (7.7-8.7)	25.2 (24.8-25.6)
6.25	92.5	8.21-8.64	469 (361-577)	8.2 (7.7-8.7)	25.2 (24.8-25.6)
12.5	100	8.25-8.67	474 (356-592)	8.2 (7.7-8.7)	25.2 (24.8-25.6)
25	97.5	8.28-8.62	483 (373-593)	8.1 (7.6-8.6)	25.2 (24.8-25.6)
50	100	8.31-8.57	534 (415-653)	8.1 (7.6-8.6)	25.2 (24.8-25.6)
100	100	8.33-8.59	548 (469-627)	8.2 (7.6-8.7)	25.2 (24.8-25.6)

SC-EE03-TX-001 94:	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )	Ammonia (mg/L)
	240	200	<40 ppb

**TEST SUMMARY: SC-EE04-TX-001 94**  
***Ceriodaphnia dubia* 48-Hour Static Acute**

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Test protocol:	WCC - SOP 401.2
Test organism:	<i>Ceriodaphnia dubia</i>
Source:	WCC Culture Laboratory
Age of test organism:	<24 hours
Test initiation:	10/28/1994 @ 1530
Test termination:	10/31/1994 @ 1230
Temperature:	25 +/- 1°C
Light:	50-100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	30 mL styrene
Test volume:	20 mL
Organisms/replicate:	5
Replicates/concentration:	4
Feeding regime:	none
Aeration during test:	none
Dilution Water:	Hard Reconstituted Synthetic
Test duration:	48 hours
Effect measured:	Mortality
Reference Toxicant Data:	
LC <sub>50</sub> (g/L NaCl):	2.46

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**TEST RESULTS: SC-EE04-TX-001 94**  
***Ceriodaphnia dubia* 48-Hour Static Acute**

LC<sub>50</sub>>100%

Statistical analysis method: N/A

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )
Control	95	8.5	668 (613-722)	8.2 (7.8-8.5)	25.2-25.4	220	130
6.25	90	8.46-8.54	675 (644-705)	8.4 (8.0-8.8)	25.2-25.4		
12.5	100	8.51-8.52	668 (645-691)	8.4 (8.0-8.8)	25.2-25.4		
25	90	8.52-8.53	646 (625-666)	8.5 (8.1-8.8)	25.2-25.4		
50	90	8.52-8.55	599 (578-620)	8.5 (8.0-8.9)	25.2-25.4		
100	85	8.50-8.62	523 (518-527)	8.5 (8.0-8.9)	25.2-25.4	230	120

**SURFACE WATER SAMPLE ARRIVAL INFORMATION**

<b>Collection Date/Time:</b>	10/27/94 @1000
<b>Use Date/Time:</b>	10/28/94@1530
<b>Method of Shipment:</b>	Overnight Courier
<b>Temperature (°C):</b>	2
<b>pH:</b>	8.5
<b>Ammonia (mg/L):</b>	<40ppb
<b>Conductivity (umhos/cm):</b>	518
<b>DO (mg/L):</b>	8.9

**TEST SUMMARY: SC-EE04-TX-001 94**  
***Ceriodaphnia dubia* Chronic Renewal**

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Test protocol:	WCC - SOP 501.1
Test organism:	<i>Ceriodaphnia dubia</i>
Source:	WCC Culture Laboratory
WCC Batch:	10/30/94 to 10/31/94
Age of test organism:	<24 hours
Test initiation:	10/31/1994 @ 1545
Test termination:	11/8/1994 @ 1650
Temperature:	25 +/- 1°C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	30 mL styrene
Test volume:	20 mL
Organisms/replicate:	1
Replicates/concentration:	10
Feeding regime:	0.05 mL <i>Selenastrum</i> and 0.05 mL YTC daily
Aeration during test:	none
Dilution Water:	Hard Reconstituted Synthetic
Test duration:	7 days
Effect measured:	Survival and Reproduction
Toxicity test methods and procedures were followed in accordance with EPA 600/4-89/001	
Reference Toxicant Data:	
NOEC (g/L NaCl):	0.5

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**TEST RESULTS: SC - EE04-TX-001 94**  
***Ceriodaphnia dubia* Chronic Survival and Reproduction Test**

**Survival NOEC:**

Statistical analysis method:	>100%
Normality test:	Steel's Many-One Rank
Homogeneity of variance test:	Fail

**Reproduction NOEC:**

Statistical analysis method:	>100%
Normality test:	Dunnett's
Homogeneity of variance test:	Pass

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Control	100	8.25-8.65	534 (380-688)	8.2 (7.7-8.7)	25.3 (25.0-25.5)
6.25	100	8.32-8.52	542 (401-683)	8.3 (7.9-8.6)	25.3 (25.0-25.5)
12.5	100	8.28-8.53	527 (393-661)	8.2 (7.8-8.5)	25.3 (25.0-25.5)
25	100	8.35-8.53	522 (409-635)	8.2 (7.8-8.5)	25.3 (25.0-25.5)
50	100	8.36-8.55	517 (443-591)	8.2 (7.8-8.5)	25.3 (25.0-25.5)
100	100	8.35-8.60	492 (413-570)	8.3 (7.8-8.7)	25.3 (25.0-25.5)

	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )	Ammonia (mg/L)
Control	220	130	<0.01
EE04	230	210	<40 ppb

## EFFLUENT ARRIVAL INFORMATION

Collection Dates and Times	Use Dates	Temperature (°C)	pH	Conductivity (umhos/cm)	DO (mg/L)	Description	Method of Shipment
10/27/94 @1000	10/28/94-11/08/94	2	8.5	518	8.9	Clear	Overnight Courier

**TEST SUMMARY: SC-EE04-TX-001 94**  
***Pimephales promelas* 48-Hour Static Acute**

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Test protocol:	WCC -SOP 410.2
Test organism:	<i>Pimephales promelas</i>
Source:	Woodward-Clyde Consultants
Age of test organism:	6 days
Test initiation:	10/28/1994 @ 1600
Test termination:	10/31/1994 @ 1200
Temperature:	20 +/- 1°C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	500 mL plastic beaker
Test volume:	250 mL
Organisms/replicate:	10
Replicates/concentration:	2
Feeding regime:	none
Aeration during test:	none
Dilution Water:	Spring
Test duration:	48 hours
Effect measured:	Mortality
Reference Toxicant Data:	
LC <sub>50</sub> (g/L NaCl):	6.52

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**TEST RESULTS: SC- EE04-TX-001 94**  
***Pimephales promelas* 48-Hour Static Acute**

LC<sub>50</sub>>100%

Statistical analysis method: N/A

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )	Ammonia (mg/L)
Control	100	8.62-8.63	395 (380-409)	8.3 (8.2-8.4)	25.2-25.4	200	230	<0.01
6.25	100	8.57-8.64	400 (399-400)	8.6 (8.4-8.8)	25.2-25.4			
12.5	100	8.55-8.58	396 (386-405)	8.6 (8.3-8.8)	25.2-25.4			
25	100	8.58-8.59	414 (403-425)	8.7 (8.4-8.9)	25.2-25.4			
50	100	8.58-8.61	449 (436-461)	8.7 (8.5-8.9)	25.2-25.4			
100	100	8.50-8.61	516 (508-524)	8.7 (8.5-8.9)	25.2-25.4	230	210	<40ppb

**SURFACE WATER SAMPLE ARRIVAL INFORMATION**

<b>Collection Date/Time:</b>	10/27/94 @1000
<b>Use Date/Time:</b>	10/28/94 @1530
<b>Method of Shipment:</b>	Overnight courier
<b>Temperature (°C):</b>	2
<b>pH:</b>	8.5
<b>Ammonia (mg/L):</b>	<40ppb
<b>Conductivity (umhos/cm):</b>	518
<b>DO (mg/L):</b>	8.9
<b>Description:</b>	clear

**TEST SUMMARY: SC-EE04-TX-001 94**  
***Pimephales promelas* Chronic Renewal**

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Test protocol:	WCC - SOP 510.1
Test organism:	<i>Pimephales promelas</i>
Source:	Enviromental Consulting & Testing
Age of test organism:	< 24 hours
Test initiation:	10/31/94 @1800
Test termination:	11/07/94 @ 11610
Temperature:	25 +/- 1
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	500 mL plastic beaker
Test volume:	250 mL
Organisms/replicate:	10
Replicates/concentration:	4
Feeding regime:	0.1 mL brine shrimp nauplii twice daily
Aeration during test:	none
Dilution Water:	Spring
Test duration:	7 days
Effect measured:	Survival and growth
Toxicity test methods and procedures were followed in accordance with EPA 600/4-89/001	
Reference Toxicant Data:	
NOEC (g/L NaCl):	3

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**TEST RESULTS: SC-EE04-TX-001 94**  
***Pimephales promelas* Chronic Survival and Growth Test**

<b>Survival NOEC:</b>	>100%
Statistical analysis method:	Steel's Many-One Rank
Normality test:	Pass
Homogeneity of variance test:	Fail
<b>Growth NOEC:</b>	100%
Statistical analysis method:	Dunnett's
Normality test:	Pass
Homogeneity of variance test:	Pass

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Control	97.5	8.23-8.68	496 (349-642)	8.2 (7.7-8.7)	25.2 (24.8-25.6)
6.25	100	7.54-8.67	515 (379-651)	7.9 (7.2-8.6)	25.2 (24.8-25.6)
12.5	95	8.27-8.70	485 (374-595)	7.9 (7.1-8.6)	25.2 (24.8-25.6)
25	97.5	8.28-8.65	449 (336-561)	7.9 (7.1-8.6)	25.2 (24.8-25.6)
50	92.5	8.26-8.64	474 (361-587)	7.9 (7.1-8.6)	25.2 (24.8-25.6)
100	97.5	8.31-8.60	463 (401-524)	7.8 (7.0-8.6)	25.2 (24.8-25.6)

SC-EE04-TX-001 94:	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )	Ammonia (mg/L)
	230	210	<40 ppb

**TEST SUMMARY: SC-EE05-TX-001 94**  
***Ceriodaphnia dubia* 48-Hour Static Acute**

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Test protocol:	WCC - SOP 401.2
Test organism:	<i>Ceriodaphnia dubia</i>
Source:	WCC Culture Laboratory
Age of test organism:	<24 hours
Test initiation:	10/28/1994 @ 1530
Test termination:	10/31/1994 @ 1240
Temperature:	25 +/- 1°C
Light:	50-100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	30 mL styrene
Test volume:	20 mL
Organisms/replicate:	5
Replicates/concentration:	4
Feeding regime:	none
Aeration during test:	none
Dilution Water:	Hard Reconstituted Synthetic
Test duration:	48 hours
Effect measured:	Mortality
Reference Toxicant Data:	
LC <sub>50</sub> (g/L NaCl):	2.46

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**TEST RESULTS: SC-EE05-TX-001 94**  
***Ceriodaphnia dubia* 48-Hour Static Acute**

$LC_{50} > 100\%$

Statistical analysis method: N/A

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )
Control	95	8.5	668 (613-722)	8.2 (7.8-8.5)	25.2-25.4	220	130
6.25	100	8.50-8.55	673 (650-695)	8.5 (8.0-8.9)	25.2-25.4		
12.5	95	8.52-8.53	660 (632-688)	8.5 (8.0-8.9)	25.2-25.4		
25	75	8.53-8.55	620 (597-642)	8.5 (8.0-8.9)	25.2-25.4		
50	90	8.53-8.57	554 (517-590)	8.5 (8.0-8.9)	25.2-25.4		
100	90	8.53-8.63	426 (418-433)	8.5 (8.0-8.9)	25.2-25.4	190	220

**SURFACE WATER SAMPLE ARRIVAL INFORMATION**

<b>Collection Date/Time:</b>	10/27/94 @930
<b>Use Date/Time:</b>	10/28/94 @1530
<b>Method of Shipment:</b>	Overnight Courier
<b>Temperature (°C):</b>	1
<b>pH:</b>	8.53
<b>Ammonia (mg/L):</b>	<40 ppb
<b>Conductivity (umhos/cm):</b>	418
<b>DO (mg/L):</b>	8.9

**TEST SUMMARY: SC-EE05-TX-001 94**  
***Ceriodaphnia dubia* Chronic Renewal**

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Test protocol:	WCC - SOP 501.1
Test organism:	<i>Ceriodaphnia dubia</i>
Source:	WCC Culture Laboratory
WCC Batch:	10/30/94 to 10/31/94
Age of test organism:	<24 hours
Test initiation:	10/31/1994 @ 1620
Test termination:	11/8/1994 @ 1710
Temperature:	25 +/- 1°C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	30 mL styrene
Test volume:	20 mL
Organisms/replicate:	1
Replicates/concentration:	10
Feeding regime:	0.05 mL <i>Selenastrum</i> and 0.05 mL YTC daily
Aeration during test:	none
Dilution Water:	Hard Reconstituted Synthetic
Test duration:	7 days
Effect measured:	Survival and Reproduction
Toxicity test methods and procedures were followed in accordance with EPA 600/4-89/001	
Reference Toxicant Data:	
NOEC (g/L NaCl):	0.5

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**TEST RESULTS: SC - EE05-TX-001 94**  
***Ceriodaphnia dubia* Chronic Survival and Reproduction Test**

**Survival NOEC:**

Statistical analysis method:	>100%
Normality test:	Steel's Many-One Rank
Homogeneity of variance test:	Fail

**Reproduction NOEC:**

Statistical analysis method:	>100%
Normality test:	Dunnett's
Homogeneity of variance test:	Pass

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Control	100	8.22-8.55	490 (420-560)	8.2 (7.8-8.6)	25.2 (25.0-25.3)
6.25	90	8.23-8.52	485 (375-594)	8.2 (7.8-8.6)	25.2 (25.0-25.3)
12.5	100	8.22-8.49	474 (376-571)	8.3 (7.8-8.7)	25.2 (25.0-25.3)
25	100	8.24-8.50	461 (380-542)	8.2 (7.7-8.7)	25.2 (25.0-25.3)
50	100	8.36-8.52	437 (382-492)	8.2 (7.8-8.6)	25.2 (25.0-25.3)
100	100	8.24-8.59	433 (356-500)	8.4 (7.8-9.0)	25.2 (25.0-25.3)

	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )	Ammonia (mg/L)
Control	220	130	<0.01
EE05	190	220	<40 ppb

## EFFLUENT ARRIVAL INFORMATION

Collection Dates and Times	Use Dates	Temperature (°C)	pH	Conductivity (umhos/cm)	DO (mg/L)	Description	Method of Shipment
10/27/94 @900	10/28/94-11/08/94	1	8.9	418	8.9	Clear	Overnight Courier

**TEST SUMMARY: SC-EE05-TX-001 94**  
***Pimephales promelas* 48-Hour Static Acute**

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Test protocol:	WCC - SOP 410.2
Test organism:	<i>Pimephales promelas</i>
Source:	Woodward-Clyde Consultants
Age of test organism:	6 days
Test initiation:	10/28/1994 @ 1600
Test termination:	10/31/1994 @ 1200
Temperature:	20 +/- 1°C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	500 mL plastic beaker
Test volume:	250 mL
Organisms/replicate:	10
Replicates/concentration:	2
Feeding regime:	none
Aeration during test:	none
Dilution Water:	Spring
Test duration:	48 hours
Effect measured:	Mortality
Reference Toxicant Data:	
LC <sub>50</sub> (g/L NaCl):	6.52

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**TEST RESULTS: SC- EE05-TX-001 94**  
***Pimephales promelas* 48-Hour Static Acute**

LC<sub>50</sub>>100%

Statistical analysis method: N/A

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )	Ammonia (mg/L)
Control	100	8.62-8.63	395 (380-409)	8.3 (8.2-8.4)	25.2-25.4	200	230	<0.01
6.25	100	8.55-8.61	394 (385-402)	8.7 (8.5-8.9)	25.2-25.4			
12.5	100	8.58-8.63	393 (385-400)	8.7 (8.5-8.9)	25.2-25.4			
25	100	8.58-8.61	391 (385-397)	8.7 (8.5-8.9)	25.2-25.4			
50	100	8.58-8.61	397 (391-403)	8.7 (8.5-8.9)	25.2-25.4			
100	100	8.58-8.63	372 (368-375)	8.7 (8.5-8.9)	25.2-25.4	190	220	<40ppb

**SURFACE WATER SAMPLE ARRIVAL INFORMATION**

<b>Collection Date/Time:</b>	10/27/94 @900
<b>Use Date/Time:</b>	10/28/94 @1600
<b>Method of Shipment:</b>	Overnight courier
<b>Temperature (°C):</b>	1
<b>pH:</b>	8.58
<b>Ammonia (mg/L):</b>	<40ppb
<b>Conductivity (umhos/cm):</b>	418
<b>DO (mg/L):</b>	8.9
<b>Description:</b>	clear

**TEST SUMMARY: SC-EE05-TX-001 94**  
***Pimephales promelas* Chronic Renewal**

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Test protocol:	WCC - SOP 510.1
Test organism:	<i>Pimephales promelas</i>
Source:	Enviromental Consulting & Testing
Age of test organism:	< 24 hours
Test initiation:	10/31/94 @1800
Test termination:	11/07/94 @ 1520
Temperature:	25 +/- 1°C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	500 mL plastic beaker
Test volume:	250 mL
Organisms/replicate:	10
Replicates/concentration:	4
Feeding regime:	0.1 mL brine shrimp nauplii twice daily
Aeration during test:	none
Dilution Water:	Spring
Test duration:	7 days
Effect measured:	Survival and growth
Toxicity test methods and procedures were followed in accordance with EPA 600/4-89/001	
Reference Toxicant Data:	
NOEC (g/L NaCl):	3

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**TEST RESULTS: SC- EE05-TX-001 94**  
***Pimephales promelas* Chronic Survival and Growth Test**

**Survival NOEC:** >100%

Statistical analysis method: Steel's Many-One Rank  
 Normality test: Pass  
 Homogeneity of variance test: Fail

**Growth NOEC:** 6.25%

Statistical analysis method: Dunnett's  
 Normality test: Pass  
 Homogeneity of variance test: Pass

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Control	97.5	8.23-8.68	496 (349-642)	8.2 (7.7-8.7)	25.2 (24.8-25.6)
6.25	95	8.19-8.69	384 (306-461)	7.8 (6.9-8.6)	25.2 (24.8-25.6)
12.5	97.5	8.22-8.69	513 (290-445)	7.8 (6.9-8.6)	25.2 (24.8-25.6)
25	97.5	8.23-8.65	384 (333-434)	7.8 (7.0-8.6)	25.2 (24.8-25.6)
50	100	8.26-8.65	380 (330-429)	7.9 (7.1-8.6)	25.2 (24.8-25.6)
100	97.5	8.23-8.55	418 (351-485)	8.0 (7.3-8.6)	25.2 (24.8-25.6)

SC-EE05-TX-001 94:	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )	Ammonia (mg/L)
	190	220	<40 ppb

**TEST SUMMARY: SC-EE06-TX-001 94**  
***Ceriodaphnia dubia* 48-Hour Static Acute**

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Test protocol:	WCC - SOP 401.2
Test organism:	<i>Ceriodaphnia dubia</i>
Source:	WCC Culture Laboratory
Age of test organism:	<24 hours
Test initiation:	10/27/1994 @ 1530
Test termination:	10/30/1994 @ 1245
Temperature:	25 +/- 1°C
Light:	50-100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	30 mL styrene
Test volume:	20 mL
Organisms/replicate:	5
Replicates/concentration:	4
Feeding regime:	none
Aeration during test:	none
Dilution Water:	Hard Reconstituted Synthetic
Test duration:	48 hours
Effect measured:	Mortality
Reference Toxicant Data:	
LC <sub>50</sub> (g/L NaCl):	2.46

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**TEST RESULTS: SC-EE06-TX-001 94**  
***Ceriodaphnia dubia* 48-Hour Static Acute**

LC<sub>50</sub>>100%

Statistical analysis method: N/A

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )
Control	95	7.86-8.28	445 (427-463)	8.6 (8.4-8.7)	25.4-25.5	180	120
6.25	95	8.26-8.30	487 (484-490)	8.6 (8.4-8.7)	25.4-25.5		
12.5	100	8.3	496 (488-504)	8.6 (8.4-8.8)	25.4-25.5		
25	100	8.30-8.31	479 (478-479)	8.6 (8.4-8.7)	25.4-25.5		
50	95	8.30-8.33	447 (410-483)	8.6 (8.4-8.8)	25.4-25.5		
100	95	8.07-8.44	384 (334-433)	9 (8.5-9.4)*	25.4-25.5	180	150

**SURFACE WATER SAMPLE ARRIVAL INFORMATION**

<b>Collection Date/Time:</b>	10/26/94 @ 1400
<b>Use Date/Time:</b>	10/27/94 @1600
<b>Method of Shipment:</b>	Overnight Courier
<b>Temperature (°C):</b>	0.5
<b>pH:</b>	8.07
<b>Ammonia (mg/L):</b>	<40ppb
<b>Conductivity (umhos/cm):</b>	334
<b>DO (mg/L):</b>	9.4*

\* Higher DO due to aeration

**TEST SUMMARY: SC-EE06-TX-001 94**  
***Ceriodaphnia dubia* Chronic Renewal**

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<b>Test protocol:</b>	WCC - SOP 501.1
<b>Test organism:</b>	<i>Ceriodaphnia dubia</i>
<b>Source:</b>	WCC Culture Laboratory
<b>WCC Batch:</b>	10/28/94 to 10/29/94
<b>Age of test organism:</b>	<24 hours
<b>Test initiation:</b>	10/29/1994 @ 1600
<b>Test termination:</b>	11/6/1994 @ 1240
<b>Temperature:</b>	25 +/- 1°C
<b>Light:</b>	50 - 100 footcandles
<b>Photoperiod:</b>	16 hours light/8 hours dark
<b>Test vessel:</b>	30 mL styrene
<b>Test volume:</b>	20 mL
<b>Organisms/replicate:</b>	1
<b>Replicates/concentration:</b>	10
<b>Feeding regime:</b>	0.05 mL <i>Selenastrum</i> and 0.05 mL YTC daily
<b>Aeration during test:</b>	none
<b>Dilution Water:</b>	Hard Reconstituted Synthetic
<b>Test duration:</b>	7 days
<b>Effect measured:</b>	Survival and Reproduction
Toxicity test methods and procedures were followed in accordance with EPA 600/4-89/001	
<b>Reference Toxicant Data:</b>	
NOEC (g/L NaCl):	0.5

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**TEST RESULTS: SC - EE06-TX-001 94**  
***Ceriodaphnia dubia* Chronic Survival and Reproduction Test**

**Survival NOEC:**

Statistical analysis method:	>100%
Normality test:	Steel's Many-One Rank
Homogeneity of variance test:	Fail

**Reproduction NOEC:**

Statistical analysis method:	>100%
Normality test:	Dunnett's
Homogeneity of variance test:	Pass

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Control	100	8.09-8.55	578 (424-732)	8.2 (7.8-8.5)	25.3 (25.0-25.6)
6.25	90	8.25-8.54	534 (420-647)	8.2 (7.8-8.6)	25.3 (25.0-25.6)
12.5	90	8.28-8.55	504 (399-609)	8.3 (7.9-8.6)	25.3 (25.0-25.6)
25	100	8.20-8.55	510 (410-610)	8.3 (7.9-8.6)	25.3 (25.0-25.6)
50	90	8.32-8.54	477 (402-551)	8.3 (8.0-8.6)	25.3 (25.0-25.6)
100	100	8.26-8.62	432 (373-490)	8.5 (8.0-9.2)	25.3 (25.0-25.6)

	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )	Ammonia (mg/L)
Control	180	120	<0.01
EE06	180	150	<40 ppb

## EFFLUENT ARRIVAL INFORMATION

Collection Dates and Times	Use Dates	Temperature (°C)	pH	Conductivity (umhos/cm)	DO (mg/L)	Description	Method of Shipment
10/26/94 @ 1400	10/27/94-11/06/94	0.5	8.07	334	9.4	Clear	Overnight Courier

**TEST SUMMARY: SC-EE06-TX-001 94**  
***Pimephales promelas* 48-Hour Static Acute**

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Test protocol:	WCC - SOP 410.2
Test organism:	<i>Pimephales promelas</i>
Source:	Woodward-Clyde Consultants
Age of test organism:	6 days
Test initiation:	10/27/1994 @ 1600
Test termination:	10/30/1994 @ 1230
Temperature:	20 +/- 1°C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	500 mL plastic beaker
Test volume:	250 mL
Organisms/replicate:	10
Replicates/concentration:	2
Feeding regime:	none
Aeration during test:	none
Dilution Water:	Hard Reconstituted Synthhetic
Test duration:	48 hours
Effect measured:	Mortality
Reference Toxicant Data:	
LC <sub>50</sub> (g/L NaCl):	6.52

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**TEST RESULTS: SC- EE06-TX-001 94**  
***Pimephales promelas* 48-Hour Static Acute**

LC<sub>50</sub>>100%

Statistical analysis method: N/A

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )	Ammonia (mg/L)
Control	100	7.86-8.28	445 (427-463)	8.6 (8.4-8.7)	25.4-25.5	180	120	<0.01
6.25	100	8.26-8.30	487 (484-490)	8.6 (8.4-8.7)	25.4-25.5			
12.5	100	8.3	496 (488-504)	8.6 (8.4-8.8)	25.4-25.5			
25	100	8.30-8.31	479 (478-479)	8.6 (8.4-8.7)	25.4-25.5			
50	100	8.30-8.33	447 (410-483)	8.6 (8.4-8.8)	25.4-25.5			
100	100	8.07-8.44	384 (334-433)	9 (8.5-9.4)*	25.4-25.5	180	150	<40ppb

**SURFACE WATER SAMPLE ARRIVAL INFORMATION**

<b>Collection Date/Time:</b>	10/26/94 @1400
<b>Use Date/Time:</b>	10/27/94 @ 1600
<b>Method of Shipment:</b>	Overnight courier
<b>Temperature (°C):</b>	0.5
<b>pH:</b>	8.07
<b>Ammonia (mg/L):</b>	<40ppb
<b>Conductivity (umhos/cm):</b>	334
<b>DO (mg/L):</b>	9.4*
<b>Description:</b>	clear

\*Higher DO due to aeration

**TEST SUMMARY: SC-EE06-TX-001 94**  
***Pimephales promelas* Chronic Renewal**

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Test protocol: WCC - SOP 510.1  
Test organism: *Pimephales promelas*  
Source: Enviromental Consulting & Testing  
Age of test organism: < 24 hours  
Test initiation: 10/29/94 @ 1700  
Test termination: 11/05/94 @1225  
Temperature: 25 +/- 1°C  
Light: 50 - 100 foot candles  
Photoperiod: 16 hours light/8 hours dark  
Test vessel: 500 mL plastic beaker  
Test volume: 250 mL  
Organisms/replicate: 10  
Replicates/concentration: 4  
Feeding regime: 0.1 mL brine shrimp nauplii twice daily  
Aeration during test: none  
Dilution Water: Spring  
Test duration: 7 days  
Effect measured: Survival and growth  
Toxicity test methods and procedures were followed in accordance with EPA 600/4-89/001  
Reference Toxicant Data:  
NOEC (g/L NaCl): 3

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**TEST RESULTS: SC- EE06-TX-001 94**  
***Pimephales promelas* Chronic Survival and Growth Test**

<b>Survival NOEC:</b>	>100%
Statistical analysis method:	Steel's Many-One Rank
Normality test:	Pass
Homogeneity of variance test:	Fail
<b>Growth NOEC:</b>	>100%
Statistical analysis method:	Dunnett's
Normality test:	Pass
Homogeneity of variance test:	Pass

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Control	100	8.11-8.65	448 (377-519)	7.9 (7.2-8.5)	25.0 (24.5-25.4)
6.25	95	8.14-8.63	382 (357-406)	7.9 (7.3-8.5)	25.0 (24.5-25.4)
12.5	95	8.09-8.63	361 (320-401)	7.6 (6.6-8.6)	25.0 (24.5-25.4)
25	100	8.09-8.61	371 (335-407)	7.7 (6.7-8.6)	25.0 (24.5-25.4)
50	95	8.15-8.61	373 (333-412)	7.9 (7.2-8.6)	25.0 (24.5-25.4)
100	95	8.12-8.52	454 (323-585)	7.9 (7.1-8.6)	25.0 (24.5-25.4)

SC-EE06-TX-001 94:	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )	Ammonia (mg/L)
	180	150	<40 ppb

**TEST SUMMARY: SC-EE07-TX-001 94**  
***Ceriodaphnia dubia* 48-Hour Static Acute**

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Test protocol:	WCC - SOP 401.2
Test organism:	<i>Ceriodaphnia dubia</i>
Source:	WCC Culture Laboratory
Age of test organism:	<24 hours
Test initiation:	10/27/1994 @ 1530
Test termination:	10/30/1994 @ 1250
Temperature:	25 +/- 1°C
Light:	50-100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	30 mL styrene
Test volume:	20 mL
Organisms/replicate:	5
Replicates/concentration:	4
Feeding regime:	none
Aeration during test:	none
Dilution Water:	Moderately Hard Reconstituted Synthetic
Test duration:	48 hours
Effect measured:	Mortality
Reference Toxicant Data:	
LC <sub>50</sub> (g/L NaCl):	2.46

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**TEST RESULTS: SC-EE07-TX-001 94**  
***Ceriodaphnia dubia* 48-Hour Static Acute**

LC<sub>50</sub>>100%

Statistical analysis method: N/A

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )
Control	95	7.86-8.28	445 (427-463)	8.6 (8.4-8.7)	25.4-25.5	80	60
6.25	100	8.07-8.19	302 (251-352)	8.4 (8.2-8.5)	25.4-25.5		
12.5	100	8.02-8.17	265 (247-282)	8.5 (8.3-8.6)	25.4-25.5		
25	100	7.99-8.19	274 (270-278)	8.5 (8.3-8.5)	25.4-25.5		
50	100	7.94-8.26	296 (268-324)	8.5 (8.4-8.6)	25.4-25.5		
100	100	7.87-8.34	301 (256-346)	8.7 (8.5-8.9)	25.4-25.5	90	140

**SURFACE WATER SAMPLE ARRIVAL INFORMATION**

<b>Collection Date/Time:</b>	10/26/94 @ 1130
<b>Use Date/Time:</b>	10/27/94 @1530
<b>Method of Shipment:</b>	Overnight Courier
<b>Temperature (°C):</b>	2.5
<b>pH:</b>	7.87
<b>Ammonia (mg/L):</b>	<40ppb
<b>Conductivity (umhos/cm):</b>	256
<b>DO (mg/L):</b>	8.9

**TEST SUMMARY: SC-EE07-TX-001 94**  
***Ceriodaphnia dubia* Chronic Renewal**

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Test protocol:	WCC - SOP 501.1
Test organism:	<i>Ceriodaphnia dubia</i>
Source:	WCC Culture Laboratory
WCC Batch:	10/28/94 to 10/29/94
Age of test organism:	<24 hours
Test initiation:	10/29/1994 @ 1530
Test termination:	11/6/1994 @ 1300
Temperature:	25 +/- 1°C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	30 mL styrene
Test volume:	20 mL
Organisms/replicate:	1
Replicates/concentration:	10
Feeding regime:	0.05 mL <i>Selenastrum</i> and 0.05 mL YTC daily
Aeration during test:	none
Dilution Water:	Moderately Hard Reconstituted Synthetic
Test duration:	7 days
Effect measured:	Survival and Reproduction
Toxicity test methods and procedures were followed in accordance with EPA 600/4-89/001	
Reference Toxicant Data:	
NOEC (g/L NaCl):	0.5

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**TEST RESULTS: SC - EE07-TX-001 94**  
***Ceriodaphnia dubia* Chronic Survival and Reproduction Test**

**Survival NOEC:**

Statistical analysis method:	>100%
Normality test:	Steel's Many-One Rank
Homogeneity of variance test:	Fail

**Reproduction NOEC:**

Statistical analysis method:	100%
Normality test:	Steel's Many-One Rank
Homogeneity of variance test:	Pass

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Control	100	8.09-8.51	341 (294-387)	8.4 (8.1-8.7)	25.3 (25.0-25.6)
6.25	100	8.20-8.44	338 (289-386)	8.4 (8.1-8.7)	25.3 (25.0-25.6)
12.5	100	8.20-8.43	320 (268-372)	8.4 (8.1-8.7)	25.3 (25.0-25.6)
25	100	8.22-8.40	310 (274-346)	8.4 (8.1-8.7)	25.3 (25.0-25.6)
50	100	8.18-8.46	307 (263-351)	8.4 (8.1-8.7)	25.3 (25.0-25.6)
100	95	8.04-8.55	287 (266-308)	8.6 (8.1-9.0)	25.3 (25.0-25.6)

Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )	Ammonia (mg/L)
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Control	80	60	<0.01
EE07	90	140	<40 ppb

## EFFLUENT ARRIVAL INFORMATION

Collection Dates and Times	Use Dates	Temperature (°C)	pH	Conductivity (umhos/cm)	DO (mg/L)	Description	Method of Shipment
10/26/94 @ 1130	10/27/94-11/05/94	1.5	7.87	256	8.9	Clear	Overnight Courier

**TEST SUMMARY: SC-EE07-TX-001 94**  
***Pimephales promelas* 48-Hour Static Acute**

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Test protocol:	WCC - SOP 410.2
Test organism:	<i>Pimephales promelas</i>
Source:	Woodward-Clyde Consultants
Age of test organism:	6 days
Test initiation:	10/27/1994 @ 1600
Test termination:	10/30/1994 @ 1200
Temperature:	20 +/- 1°C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	500 mL plastic beaker
Test volume:	250 mL
Organisms/replicate:	10
Replicates/concentration:	2
Feeding regime:	none
Aeration during test:	none
Dilution Water:	Moderately Hard Reconstituted Synthhetic
Test duration:	48 hours
Effect measured:	Mortality
Reference Toxicant Data:	
LC <sub>50</sub> (g/L NaCl):	6.52

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**TEST RESULTS: SC- EE07-TX-001 94**  
***Pimephales promelas* 48-Hour Static Acute**

LC<sub>50</sub>>100%

Statistical analysis method: N/A

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )	Ammonia (mg/L)
Control	100	7.86-8.28	445 (427-463)	8.6 (8.4-8.7)	25.4-25.5	80	60	<0.01
6.25	100	8.07-8.19	302 (251-352)	8.4 (8.2-8.5)	25.4-25.5			
12.5	100	8.02-8.17	265 (247-282)	8.5 (8.3-8.6)	25.4-25.5			
25	100	7.99-8.19	274 (270-278)	8.4 (8.3-8.5)	25.4-25.5			
50	100	7.94-8.26	296 (268-324)	8.5 (8.4-8.6)	25.4-25.5			
100	100	7.87-8.34	301 (256-346)	8.5 (8.4-8.5)	25.4-25.5	90	140	<40ppb

**SURFACE WATER SAMPLE ARRIVAL INFORMATION**

**Collection Date/Time:** 10/26/94 @1130

**Use Date/Time:** 10/27/94 @ 1600

**Method of Shipment:** Overnight courier

**Temperature (°C):** 1.5

**pH:** 7.87

**Ammonia (mg/L):** <40ppb

**Conductivity (umhos/cm):** 256

**DO (mg/L):** 8.9

**Description:** clear

**TEST SUMMARY: SC-EE07-TX-001 94**  
***Pimephales promelas* Chronic Renewal**

---

Test protocol:	WCC - SOP 510.1
Test organism:	<i>Pimephales promelas</i>
Source:	Enviromental Consulting & Testing
Age of test organism:	< 24 hours
Test initiation:	10/29/94 @ 1700
Test termination:	11/05/94 @1315
Temperature:	25 +/- 1°C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	500 mL plastic beaker
Test volume:	250 mL
Organisms/replicate:	10
Replicates/concentration:	4
Feeding regime:	0.1 mL brine shrimp nauplii twice daily
Aeration during test:	none
Dilution Water:	Moderately Hard Reconstituted Synthetic
Test duration:	7 days
Effect measured:	Survival and growth
Toxicity test methods and procedures were followed in accordance with EPA 600/4-89/001	
Reference Toxicant Data:	
NOEC (g/L NaCl):	3

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**TEST RESULTS: SC- EE07-TX-001 94**  
***Pimephales promelas* Chronic Survival and Growth Test**

**Survival NOEC:**

Statistical analysis method:	>100%
Normality test:	Steel's Many-One Rank
Homogeneity of variance test:	Pass

**Growth NOEC:**

Statistical analysis method:	>100%
Normality test:	Dunnett's
Homogeneity of variance test:	Pass

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Control	95	7.95-8.50	343 (296-389)	8.1 (7.5-8.7)	25.1 (24.8-25.4)
6.25	90	7.93-8.47	328 (291-365)	8.1 (7.5-8.7)	25.1 (24.8-25.4)
12.5	100	7.86-8.47	369 (294-444)	8.1 (7.5-8.7)	25.1 (24.8-25.4)
25	90	7.81-8.47	375 (297-453)	8.1 (7.4-8.7)	25.1 (24.8-25.4)
50	92.5	7.92-8.92	390 (272-507)	8.0 (7.3-8.7)	25.1 (24.8-25.4)
100	95	7.97-8.44	583 (266-900)	8.2 (7.4-9.0)	25.1 (24.8-25.4)

SC-EE07-TX-001 94:	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )	Ammonia (mg/L)
	90	140	<40 ppb

**TEST SUMMARY: SC-EE08-TX-001 94**  
***Ceriodaphnia dubia* 48-Hour Static Acute**

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Test protocol:	WCC - SOP 401.2
Test organism:	<i>Ceriodaphnia dubia</i>
Source:	WCC Culture Laboratory
Age of test organism:	<24 hours
Test initiation:	10/27/1994 @ 1530
Test termination:	10/30/1994 @ 1230
Temperature:	25 +/- 1°C
Light:	50-100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	30 mL styrene
Test volume:	20 mL
Organisms/replicate:	5
Replicates/concentration:	4
Feeding regime:	none
Aeration during test:	none
Dilution Water:	Hard Reconstituted Synthetic
Test duration:	48 hours
Effect measured:	Mortality
Reference Toxicant Data:	
LC <sub>50</sub> (g/L NaCl):	2.46

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**TEST RESULTS: SC-EE08-TX-001 94**  
***Ceriodaphnia dubia* 48-Hour Static Acute**

LC<sub>50</sub> >100%  
 Statistical analysis method: N/A

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )
Control	100	7.86-8.28	445 (427-463)	8.6 (8.4-8.7)	25.4-25.5	180	120
6.25	95	8.29-8.32	541 (491-591)	8.7 (8.5-8.8)	25.4-25.5		
12.5	100	8.29-8.30	638 (603-672)	8.6 (8.4-8.8)	25.4-25.5		
25	100	8.16-8.30	655 (648-662)	8.6 (8.4-8.8)	25.4-25.5		
50	100	8.00-8.35	768 (763-772)	8.7 (8.5-8.9)	25.4-25.5		
100	100	7.78-8.43	1100 (1027-1172)	8.8 (8.6-9.0)	25.4-25.5	230	190

**SURFACE WATER SAMPLE ARRIVAL INFORMATION**

**Collection Date/Time:** 10/26/94 @ 1030

**Use Date/Time:** 10/27/94 @1530

**Method of Shipment:** Overnight Courier

**Temperature (°C):** 1

**pH:** 7.78

**Ammonia (mg/L):** <40ppb

**Conductivity (umhos/cm):** 1027

**DO (mg/L):** 9

**TEST SUMMARY: SC-EE08-TX-001 94**  
***Ceriodaphnia dubia* Chronic Renewal**

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<b>Test protocol:</b>	WCC - SOP 501.1
<b>Test organism:</b>	<i>Ceriodaphnia dubia</i>
<b>Source:</b>	WCC Culture Laboratory
<b>WCC Batch:</b>	10/28/94 to 10/29/94
<b>Age of test organism:</b>	<24 hours
<b>Test initiation:</b>	10/29/1994 @ 1615
<b>Test termination:</b>	11/5/1994 @ 1335
<b>Temperature:</b>	25 +/- 1°C
<b>Light:</b>	50 - 100 foot candles
<b>Photoperiod:</b>	16 hours light/8 hours dark
<b>Test vessel:</b>	30 mL styrene
<b>Test volume:</b>	20 mL
<b>Organisms/replicate:</b>	1
<b>Replicates/concentration:</b>	10
<b>Feeding regime:</b>	0.05 mL <i>Selenastrum</i> and 0.05 mL YTC daily
<b>Aeration during test:</b>	none
<b>Dilution Water:</b>	Hard Reconstituted Synthetic
<b>Test duration:</b>	7 days
<b>Effect measured:</b>	Survival and Reproduction
Toxicity test methods and procedures were followed in accordance with EPA 600/4-89/001	
<b>Reference Toxicant Data:</b>	
NOEC (g/L NaCl):	0.5

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**TEST RESULTS: SC - EE08-TX-001 94**  
***Ceriodaphnia dubia* Chronic Survival and Reproduction Test**

**Survival NOEC:**

Statistical analysis method:	>100%
Normality test:	Steel's Many-One Rank
Homogeneity of variance test:	Fail

**Reproduction NOEC:**

Statistical analysis method:	100%
Normality test:	Steel's Many-One Rank
Homogeneity of variance test:	Pass

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Control	100	8.39-8.59	594 (524-663)	8.4 (8.1-8.7)	25.3 (25.0-25.6)
6.25	90	8.39-8.59	642 (575-708)	8.4 (8.1-8.7)	25.3 (25.0-25.6)
12.5	100	8.35-8.62	632 (534-730)	8.4 (8.1-8.6)	25.3 (25.0-25.6)
25	80	8.33-8.60	678 (590-765)	8.4 (8.1-8.6)	25.3 (25.0-25.6)
50	100	8.16-8.62	831 (746-915)	8.3 (8.0-8.6)	25.3 (25.0-25.6)
100	100	7.95-8.62	1058 (993-1123)	8.5 (8.0-9.0)	25.3 (25.0-25.6)

Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )	Ammonia (mg/L)
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Control	220	<0.01
EE08	230	<40 ppb

## EFFLUENT ARRIVAL INFORMATION

Collection Dates and Times	Use Dates	Temperature (°C)	pH	Conductivity (umhos/cm)	DO (mg/L)	Description	Method of Shipment
10/26/94 @ 1030	10/27/94-11/05/94	1	7.78	1027	9	Clear	Overnight Courier

**TEST SUMMARY: SC-EE08-TX-001 94**  
***Pimephales promelas* 48-Hour Static Acute**

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Test protocol:	WCC - SOP 410.2
Test organism:	<i>Pimephales promelas</i>
Source:	Woodward-Clyde Consultants
Age of test organism:	6 days
Test initiation:	10/27/1994 @ 1600
Test termination:	10/30/1994 @ 1130
Temperature:	20 +/- 1°C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	500 mL plastic beaker
Test volume:	250 mL
Organisms/replicate:	10
Replicates/concentration:	2
Feeding regime:	none
Aeration during test:	none
Dilution Water:	Hard Reconstituted Synthhetic
Test duration:	48 hours
Effect measured:	Mortality
Reference Toxicant Data:	
LC <sub>50</sub> (g/L NaCl):	6.52

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**TEST RESULTS: SC- EE08-TX-001 94**  
***Pimephales promelas* 48-Hour Static Acute**

LC<sub>50</sub>>100%

Statistical analysis method: N/A

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )	Ammonia (mg/L)
Control	100	7.86-8.28	445 (427-463)	8.6 (8.4-8.7)	25.4-25.5	180	120	<0.01
6.25	100	8.29-8.32	541 (491-591)	8.7 (8.5-8.8)	25.4-25.5			
12.5	100	8.29-8.30	638 (603-672)	8.6 (8.4-8.8)	25.4-25.5			
25	100	8.16-8.30	655 (648-662)	8.6 (8.4-8.8)	25.4-25.5			
50	100	8.00-8.35	768 (763-772)	8.7 (8.5-8.9)	25.4-25.5			
100	100	7.78-8.43	1100 (1027-1172)	8.8 (8.6-9.0)	25.4-25.5	230	190	<40ppb

**SURFACE WATER SAMPLE ARRIVAL INFORMATION**

<b>Collection Date/Time:</b>	10/26/94 @1030
<b>Use Date/Time:</b>	10/27/94 @ 1600
<b>Method of Shipment:</b>	Overnight courier
<b>Temperature (°C):</b>	1
<b>pH:</b>	7.78
<b>Ammonia (mg/L):</b>	<40ppb
<b>Conductivity (umhos/cm):</b>	1027
<b>DO (mg/L):</b>	9
<b>Description:</b>	clear

**TEST SUMMARY: SC-EE08-TX-001 94**  
***Pimephales promelas* Chronic Renewal**

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Test protocol: WCC - SOP 510.1

Test organism: *Pimephales promelas*

Source: Enviromental Consulting & Testing

Age of test organism: < 24 hours

Test initiation: 10/29/94 @ 1700

Test termination: 11/05/94 @1450

Temperature: 25 +/- 1°C

Light: 50 - 100 foot candles

Photoperiod: 16 hours light/8 hours dark

Test vessel: 500 mL plastic beaker

Test volume: 250 mL

Organisms/replicate: 10

Replicates/concentration: 4

Feeding regime: 0.1 mL brine shrimp nauplii twice daily

Aeration during test: none

Dilution Water: Spring

Test duration: 7 days

Effect measured: Survival and growth

Toxicity test methods and procedures were followed in accordance with EPA 600/4-89/001

Reference Toxicant Data:  
NOEC (g/L NaCl): 3

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**TEST RESULTS: SC- EE08-TX-001 94**  
***Pimephales promelas* Chronic Survival and Growth Test**

**Survival NOEC:**

Statistical analysis method:	100%
Normality test:	Steel's Many-One Rank
Homogeneity of variance test:	Pass

**Growth NOEC:**

Statistical analysis method:	100%
Normality test:	Dunnett's
Homogeneity of variance test:	Pass

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Control	95	8.39-8.59	594 (524-663)	8.4 (8.1-8.7)	25.2 (24.9-25.4)
6.25	77.5	8.08-8.61	395 (350-439)	7.8 (6.9-8.7)	25.2 (24.9-25.4)
12.5	97.5	8.09-8.62	460 (418-501)	7.8 (6.9-8.7)	25.2 (24.9-25.4)
25	100	8.05-8.62	523 (494-551)	7.7 (6.6-8.8)	25.2 (24.9-25.4)
50	97.5	8.10-8.56	628 (507-748)	7.8 (6.7-8.8)	25.2 (24.9-25.4)
100	75	8.13-8.46	988 (858-1117)	7.9 (6.8-8.9)	25.2 (24.9-25.4)

SC-EE08-TX-001 94:	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )	Ammonia (mg/L)
	230	190	<40 ppb

**TEST SUMMARY: SC-EE09-TX-001 94**  
***Ceriodaphnia dubia* 48-Hour Static Acute**

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Test protocol:	WCC - SOP 401.2
Test organism:	<i>Ceriodaphnia dubia</i>
Source:	WCC Culture Laboratory
Age of test organism:	<24 hours
Test initiation:	10/27/1994 @ 1530
Test termination:	10/30/1994 @ 1245
Temperature:	25 +/- 1°C
Light:	50-100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	30 mL styrene
Test volume:	20 mL
Organisms/replicate:	5
Replicates/concentration:	4
Feeding regime:	none
Aeration during test:	none
Dilution Water:	Hard Reconstituted Synthetic
Test duration:	48 hours
Effect measured:	Mortality
Reference Toxicant Data:	
LC <sub>50</sub> (g/L NaCl):	2.46

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**TEST RESULTS: SC-EE09-TX-001 94**  
***Ceriodaphnia dubia* 48-Hour Static Acute**

LC<sub>50</sub>>100%

Statistical analysis method: N/A

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )
Control	100	7.86-8.28	445 (427-463)	8.6 (8.4-8.7)	25.4-25.5	180	120
6.25	100	8.30-8.34	612 (611-612)	8.6 (8.4-8.8)	25.4-25.5		
12.5	100	8.29-8.36	622 (613-631)	8.6 (8.5-8.7)	25.4-25.5		
25	100	8.15-8.31	728 (692-763)	8.6 (8.5-8.7)	25.4-25.5		
50	100	7.96-8.34	868 (825-910)	8.7 (8.5-8.8)	25.4-25.5		
100	100	7.72-8.38	1117 (1070-1164)	8.7 (8.5-8.8)	25.4-25.5	230	200

**SURFACE WATER SAMPLE ARRIVAL INFORMATION**

<b>Collection Date/Time:</b>	10/26/94 @ 0915
<b>Use Date/Time:</b>	10/27/94 @1530
<b>Method of Shipment:</b>	Overnight Courier
<b>Temperature (°C):</b>	2
<b>pH:</b>	7.72
<b>Ammonia (mg/L):</b>	<40ppb
<b>Conductivity (umhos/cm):</b>	1070
<b>DO (mg/L):</b>	8.8

**TEST SUMMARY: SC-EE09-TX-001 94**  
***Ceriodaphnia dubia* Chronic Renewal**

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Test protocol:	WCC - SOP 501.1
Test organism:	<i>Ceriodaphnia dubia</i>
Source:	WCC Culture Laboratory
WCC Batch:	10/28/94 to 10/29/94
Age of test organism:	<24 hours
Test initiation:	10/29/1994@1600
Test termination:	11/5/1994 @1430
Temperature:	25 +/- 1°C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	30 mL styrene
Test volume:	20 mL
Organisms/replicate:	1
Replicates/concentration:	10
Feeding regime:	0.05 mL <i>Selenastrum</i> and 0.05 mL YTC daily
Aeration during test:	none
Dilution Water:	Hard Reconstituted Synthetic
Test duration:	7 days
Effect measured:	Survival and Reproduction
Toxicity test methods and procedures were followed in accordance with EPA 600/4-89/001	
Reference Toxicant Data:	
NOEC (g/L NaCl):	0.5

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*Ceriodaphnia dubia* Chronic Survival and Reproduction Test**Survival NOEC:**

Statistical analysis method: >100%  
 Steel's Many -One Rank  
 Normality test: Fail  
 Homogeneity of variance test: Fail

**Reproduction NOEC:**

Statistical analysis method: <100%  
 Steel's Many -One Rank  
 Normality test: Pass  
 Homogeneity of variance test: Fail

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Control	100	8.39-8.59	594 (524-663)	8.4 (8.1-8.7)	25.3 (25.0-25.6)
6.25	100	8.35-8.60	653 (595-740)	8.3 (8.0-8.6)	25.3 (25.0-25.6)
12.5	90	8.26-8.57	721 (627-814)	8.3 (8.0-8.6)	25.3 (25.0-25.6)
25	100	8.28-8.59	824 (697-951)	8.4 (8.0-8.7)	25.3 (25.0-25.6)
50	100	8.17-8.62	850 (750-949)	8.3 (7.9-8.7)	25.3 (25.0-25.6)
100	100	7.91-8.62	963 (702-1223)	8.3 (7.8-8.7)	25.3 (25.0-25.6)

	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )	Ammonia (mg/L)
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Control	220		<0.01
EE09	230	200	<40 ppb

## EFFLUENT ARRIVAL INFORMATION

Collection Dates and Times	Use Dates	Temperature (°C)	pH	Conductivity (umhos/cm)	DO (mg/L)	Description	Method of Shipment
10/26/94 @ 0915	10/27/94-11/05/94	2	7.72	1070	8.8	Clear	Overnight Courier

**TEST SUMMARY: SC-EE09-TX-001 94**  
***Pimephales promelas* 48-Hour Static Acute**

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Test protocol:	WCC - SOP 410.2
Test organism:	<i>Pimephales promelas</i>
Source:	Woodward-Clyde Consultants
Age of test organism:	6 days
Test initiation:	10/27/1994 @ 1600
Test termination:	10/30/1994 @ 1230
Temperature:	20 +/- 1°C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	500 mL plastic beaker
Test volume:	250 mL
Organisms/replicate:	10
Replicates/concentration:	2
Feeding regime:	none
Aeration during test:	none
Dilution Water:	Hard Reconstituted Synthhetic
Test duration:	48 hours
Effect measured:	Mortality
Reference Toxicant Data:	
LC <sub>50</sub> (g/L NaCl):	6.52

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**TEST RESULTS: SC- EE09-TX-001 94**  
***Pimephales promelas* 48-Hour Static Acute**

LC<sub>50</sub>>100%

Statistical analysis method: N/A

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )	Ammonia (mg/L)
Control	100	7.86-8.28	445 (427-463)	8.6 (8.4-8.7)	25.4-25.5	180	120	<0.01
6.25	100	8.30-8.34	612 (611-612)	8.6 (8.4-8.8)	25.4-25.5			
12.5	100	8.29-8.36	622 (613-631)	8.6 (8.5-8.7)	25.4-25.5			
25	100	8.15-8.31	728 (692-763)	8.6 (8.5-8.7)	25.4-25.5			
50	100	7.96-8.34	868 (825-910)	8.7 (8.5-8.8)	25.4-25.5			
100	95	7.72-8.38	1117 (1070-1164)	8.7 (8.5-8.8)	25.4-25.5	230	200	<40ppb

**SURFACE WATER SAMPLE ARRIVAL INFORMATION**

<b>Collection Date/Time:</b>	10/26/94 @0915
<b>Use Date/Time:</b>	10/27/94 @ 1600
<b>Method of Shipment:</b>	Overnight courier
<b>Temperature (°C):</b>	2
<b>pH:</b>	7.72
<b>Ammonia (mg/L):</b>	<40ppb
<b>Conductivity (umhos/cm):</b>	1070
<b>DO (mg/L):</b>	8.8
<b>Description:</b>	clear

**TEST SUMMARY: SC-EE09-TX-001 94**  
***Pimephales promelas* Chronic Renewal**

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Test protocol:	WCC - SOP 510.1
Test organism:	<i>Pimephales promelas</i>
Source:	Enviromental Consulting & Testing
Age of test organism:	< 24 hours
Test initiation:	10/29/94 @ 1700
Test termination:	11/05/94 @1120
Temperature:	25 +/- 1°C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	500 mL plastic beaker
Test volume:	250 mL
Organisms/replicate:	10
Replicates/concentration:	4
Feeding regime:	0.1 mL brine shrimp nauplii twice daily
Aeration during test:	none
Dilution Water:	Spring
Test duration:	7 days
Effect measured:	Survival and growth
Toxicity test methods and procedures were followed in accordance with EPA 600/4-89/001	
Reference Toxicant Data:	
NOEC (g/L NaCl):	3

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**TEST RESULTS: SC- EE09-TX-001 94**  
***Pimephales promelas* Chronic Survival and Growth Test**

**Survival NOEC:**

Statistical analysis method:	>100%
Normality test:	Steel's Many-One Rank
Homogeneity of variance test:	Pass

**Growth NOEC:**

Statistical analysis method:	>100%
Normality test:	Dunnett's
Homogeneity of variance test:	Pass

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Control	95	8.39-8.59	594 (524-663)	8.4 (8.1-8.7)	25.1 (24.8-25.4)
6.25	100	8.15-8.66	443 (399-486)	8 (7.4-8.5)	25.1 (24.8-25.4)
12.5	95	8.14-8.64	452 (396-507)	7.9 (7.3-8.5)	25.1 (24.8-25.4)
25	95	8.15-8.96	526 (433-619)	7.9 (7.1-8.6)	25.1 (24.8-25.4)
50	100	8.14-8.95	715 (601-829)	7.9 (7.1-8.6)	25.1 (24.8-25.4)
100	90	8.00-8.93	1096 (938-1253)	7.9 (7.0-8.7)	25.1 (24.8-25.4)

SC-EE09-TX-001 94:	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )	Ammonia (mg/L)
	230	200	<40 ppb

**TEST SUMMARY: SC-EE10-TX-001 94**  
***Ceriodaphnia dubia* 48-Hour Static Acute**

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Test protocol: WCC - SOP 401.2  
Test organism: *Ceriodaphnia dubia*  
Source: WCC Culture Laboratory  
Age of test organism: <24 hours  
Test initiation: 10/26/1994 @1630  
Test termination: 10/29/1994 @ 1630  
Temperature: 25 +/- 1°C  
Light: 50-100 foot candles  
Photoperiod: 16 hours light/8 hours dark  
Test vessel: 30 mL styrene  
Test volume: 20 mL  
Organisms/replicate: 5  
Replicates/concentration: 4  
Feeding regime: none  
Aeration during test: none  
Dilution Water: Hard Reconstituted Synthetic  
Test duration: 48 hours  
Effect measured: Mortality

Reference Toxicant Data:  
LC<sub>50</sub> (g/L NaCl): 2.46

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**TEST RESULTS: SC-EE10-TX-001 94**  
***Ceriodaphnia dubia* 48-Hour Static Acute**

LC<sub>50</sub>>100%

Statistical analysis method: N/A

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )
Control	100	7.95-8.27	541 (480-601)	8 (7.8-8.2)	24.0-25.2	180	120
6.25	95	8.28-8.41	591 (537-644)	8.5 (8.4-8.5)	24.0-25.2		
12.5	100	8.28-8.36	623 (579-666)	8.4 (8.3-8.5)	24.0-25.2		
25	100	8.26-8.31	666 (593-738)	8.5 (8.4-8.5)	24.0-25.2		
50	100	8.10-8.37	829 (763-895)	8.6 (8.5-8.6)	24.0-25.2		
100	100	8.03-8.46	1096 (960-1231)	8.6 (8.4-8.7)	24.0-25.2	220	230

**SURFACE WATER SAMPLE ARRIVAL INFORMATION**

<b>Collection Date/Time:</b>	10/25/94 @ 1500
<b>Use Date/Time:</b>	10/26/94 @ 1630
<b>Method of Shipment:</b>	Overnight Courier
<b>Temperature (°C):</b>	2
<b>pH:</b>	8.03
<b>Ammonia (mg/L):</b>	<40ppb
<b>Conductivity (umhos/cm):</b>	960
<b>DO (mg/L):</b>	8.7

**TEST SUMMARY: SC-EE10-TX-001 94**  
***Ceriodaphnia dubia* Chronic Renewal**

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Test protocol:	WCC - SOP 501.1
Test organism:	<i>Ceriodaphnia dubia</i>
Source:	WCC Culture Laboratory
WCC Batch:	10/27/94 to 10/28/94
Age of test organism:	<24 hours
Test initiation:	10/28/94 @ 1615
Test termination:	11/04/94 @ 1415
Temperature:	25 +/- 1°C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	30 mL styrene
Test volume:	20 mL
Organisms/replicate:	1
Replicates/concentration:	10
Feeding regime:	0.05 mL <i>Selenastrum</i> and 0.05 mL YTC daily
Aeration during test:	none
Dilution Water:	Hard Reconstituted Synthetic
Test duration:	7 days
Effect measured:	Survival and Reproduction
Toxicity test methods and procedures were followed in accordance with EPA 600/4-89/001	
Reference Toxicant Data:	
NOEC (g/L NaCl):	0.5

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**TEST RESULTS: SC - EE10-TX-001 94**  
***Ceriodaphnia dubia* Chronic Survival and Reproduction Test**

**Survival NOEC:**

Statistical analysis method:	>100%
Normality test:	Steel's Many-One Rank
Homogeneity of variance test:	Fail

**Reproduction NOEC:**

Statistical analysis method:	<100%
Normality test:	Dunnett's
Homogeneity of variance test:	Pass

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Control	100	8.29-8.59	620 (538-702)	8.4 (8.1-8.7)	25.2 (24.9-25.4)
6.25	100	8.27-8.59	643 (583-702)	8.5 (8.2-8.7)	25.2 (24.9-25.4)
12.5	90	8.26-8.57	729 (581-877)	8.5 (8.2-8.8)	25.2 (24.9-25.4)
25	100	8.27-8.58	745 (616-874)	8.5 (8.2-8.7)	25.2 (24.9-25.4)
50	100	8.27-8.55	785 (660-910)	8.5 (8.2-8.8)	25.2 (24.9-25.4)
100	100	8.09-8.50	882 (703-1061)	8.6 (8.3-8.8)	25.2 (24.9-25.4)

	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )	Ammonia (mg/L)
Control	220		<0.01
EE10	220	230	<40 ppb

## EFFLUENT ARRIVAL INFORMATION

Collection Dates and Times	Use Dates	Temperature (°C)	pH	Conductivity (umhos/cm)	DO (mg/L)	Description	Method of Shipment
10/25/94 @ 1500	10/26/94-11/05/94	2	8.03	960	8.7	Clear	Overnight Courier

**TEST SUMMARY: SC-EE10-TX-001 94**  
***Pimephales promelas* 48-Hour Static Acute**

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Test protocol:	WCC - SOP 410.2
Test organism:	<i>Pimephales promelas</i>
Source:	Woodward-Clyde Consultants
Age of test organism:	6 days
Test initiation:	10/26/1994 @ 1630
Test termination:	10/29/1994 @ 1610
Temperature:	20 +/- 1°C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	500 mL plastic beaker
Test volume:	250 mL
Organisms/replicate:	10
Replicates/concentration:	2
Feeding regime:	none
Aeration during test:	none
Dilution Water:	Hard Reconstituted Synthhetic
Test duration:	48 hours
Effect measured:	Mortality
Reference Toxicant Data:	
LC <sub>50</sub> (g/L NaCl):	6.52

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**TEST RESULTS: SC- EE10-TX-001 94**  
***Pimephales promelas* 48-Hour Static Acute**

LC<sub>50</sub>>100%

Statistical analysis method: N/A

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )	Ammonia (mg/L)
Control	100	7.95-8.27	541 (480-601)	8 (7.8-8.2)	24.0-25.2	180	120	<0.01
6.25	100	8.28-8.41	591 (537-644)	8.5 (8.4-8.5)	24.0-25.2			
12.5	100	8.28-8.36	623 (579-666)	8.4 (8.3-8.5)	24.0-25.2			
25	100	8.26-8.31	666 (593-738)	8.5 (8.4-8.5)	24.0-25.2			
50	100	8.10-8.37	829 (763-895)	8.6 (8.5-8.6)	24.0-25.2			
100	100	8.03-8.46	1096 (960-1231)	8.6 (8.4-8.7)	24.0-25.2	220	230	<40ppb

**SURFACE WATER SAMPLE ARRIVAL INFORMATION**

<b>Collection Date/Time:</b>	10/25/94 @ 1500
<b>Use Date/Time:</b>	10/26/94 @ 1630
<b>Method of Shipment:</b>	Overnight Courier
<b>Temperature (°C):</b>	2
<b>pH:</b>	8.03
<b>Ammonia (mg/L):</b>	<40ppb
<b>Conductivity (umhos/cm):</b>	960
<b>DO (mg/L):</b>	8.7
<b>Description:</b>	clear

**TEST SUMMARY: SC-EE10-TX-001 94**  
***Pimephales promelas* Chronic Renewal**

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Test protocol:	WCC - SOP 510.1
Test organism:	<i>Pimephales promelas</i>
Source:	Enviromental Consulting & Testing
Age of test organism:	< 24 hours
Test initiation:	10/28/94 @ 1715
Test termination:	11/04/94 @1810
Temperature:	25 +/- 1°C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	500 mL plastic beaker
Test volume:	250 mL
Organisms/replicate:	10
Replicates/concentration:	4
Feeding regime:	0.1 mL brine shrimp nauplii twice daily
Aeration during test:	none
Dilution Water:	Spring
Test duration:	7 days
Effect measured:	Survival and growth
Toxicity test methods and procedures were followed in accordance with EPA 600/4-89/001	
Reference Toxicant Data:	
NOEC (g/L NaCl):	3

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**TEST RESULTS: SC- EE10-TX-001 94**  
***Pimephales promelas* Chronic Survival and Growth Test**

**Survival NOEC:**

Statistical analysis method:	>100%
Normality test:	Steel's Many-One Rank
Homogeneity of variance test:	Pass

**Growth NOEC:**

Statistical analysis method:	<6.25%
Normality test:	Dunnett's
Homogeneity of variance test:	Pass

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Control	100	7.95-8.5	343 (296-399)	8.1 (7.8-8.7)	25.2 (24.9-25.4)
6.25	97.5	8.11-8.65	516 (393-639)	7.8 (7.2-8.7)	25.2 (24.9-25.4)
12.5	100	8.07-8.64	4653 (408-497)	7.9 (7.1-8.7)	25.2 (24.9-25.4)
25	100	8.08-8.60	494 (410-578)	8.0 (7.1-8.9)	25.2 (24.9-25.4)
50	95	8.10-8.54	694 (602-785)	8.0 (7.1-8.9)	25.2 (24.9-25.4)
100	82.5	8.07-8.42	1063 (970-1156)	8.0 (7.1-8.9)	25.2 (24.9-25.4)

SC-EE10-TX-001 94:	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )	Ammonia (mg/L)
	220	230	<40 ppb

**TEST SUMMARY: SC-EW01-TX-001 94**  
***Ceriodaphnia dubia* 48-Hour Static Acute**

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Test protocol:	WCC - SOP 401.2
Test organism:	<i>Ceriodaphnia dubia</i>
Source:	WCC Culture Laboratory
Age of test organism:	<24 hours
Test initiation:	10/26/1994 @ 1630
Test termination:	10/28/1994 @ 1610
Temperature:	25 +/- 1°C
Light:	50 -100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	30mL styrene
Test volume:	20 mL
Organisms/replicate:	5
Replicates/concentration:	4
Feeding regime:	none
Aeration during test:	none
Dilution Water:	Hard Reconstituted Synthetic
Test duration:	48 hours
Effect measured:	Mortality
Reference Toxicant Data:	
LC <sub>50</sub> (g/L NaCl):	2.46

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**TEST RESULTS: SC-EW01-TX-001 94**  
***Ceriodaphnia dubia* 48-Hour Static Acute**

LC<sub>50</sub>> 100%

Statistical analysis method: N/A

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )
Control	100	7.95-8.27	541 (480-601)	8 (7.8-8.2)	24.0-25.2	180	120
6.25	100	8.25-8.27	531 (477-584)	8.1 (7.9-8.2)	24.0-25.4		
12.5	95	8.25-8.27	526 (480-571)	8.2 (8.0-8.3)	24.0-25.4		
25	100	8.17-8.31	494 (440-548)	8.3 (8.0-8.5)	24.0-25.4		
50	100	8.01-8.39	468 (422-514)	8.3 (8.0-8.5)	24.0-25.4		
100	85	7.83-8.51	398 (356-440)	8.4 (8.1-8.6)	24.0-25.4	170	180

**SURFACE WATER SAMPLE ARRIVAL INFORMATION**

<b>Collection Date/Time:</b>	10/25/94 @ 1300
<b>Use Date/Time:</b>	10/26/94 @ 1630
<b>Method of Shipment:</b>	Overnight Courier
<b>Temperature (°C):</b>	1.0
<b>pH:</b>	7.83
<b>Ammonia (mg/L):</b>	<0.01
<b>Conductivity (umhos/cm):</b>	356
<b>DO (mg/L):</b>	8.6

**TEST SUMMARY: SC-EW01-TX-001 94**  
***Ceriodaphnia dubia* Chronic Renewal**

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Test protocol:	WCC - SOP 501.1
Test organism:	<i>Ceriodaphnia dubia</i>
Source:	WCC Culture laboratory
WCC Batch:	10/27/94 to 10/28/94
Age of test organism:	< 24 hours
Test initiation:	10/28/1994 @ 1500
Test termination:	11/4/1994 @ 1300
Temperature:	25 +/-1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	30 mL styrene
Test volume:	15 mL
Organisms/replicate:	1
Replicates/concentration:	10
Feeding regime:	0.05 mL <i>Selenastrum</i> and 0.05 mL YTC daily
Aeration during test:	none
Dilution Water:	Hard Reconstituted Synthetic
Test duration:	7 days
Effect measured:	Survival and reproduction
Toxicity test methods and procedures were followed in accordance with EPA 600/4-89/001	
Reference Toxicant Data:	
NOEC (g/L NaCl):	0.5

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**TEST RESULTS: SC- EW01-TX-001 94**  
***Ceriodaphnia dubia* Chronic Survival and Reproduction Test**

**Survival NOEC:**

Statistical analysis method:	>100%
Normality test:	Steel's Many-One Rank
Homogeneity of variance test:	Fail

**Reproduction NOEC:**

Statistical analysis method:	>100%
Normality test:	Dunnett's test
Homogeneity of variance test:	Pass

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Control	100	7.80-8.53	556 (379-736)	8.4 (8.0-8.7)	25.2 (25.0-25.4)
6.25	100	8.13-8.54	553 (423-682)	8.4 (8.1-8.7)	25.2 (25.0-25.4)
12.5	100	8.31-8.56	576 (438-714)	8.5 (8.2-8.8)	25.2 (25.0-25.4)
25	100	8.28-8.58	520 (400-639)	8.5 (8.2-8.8)	25.2 (25.0-25.4)
50	90	8.30-8.63	486 (410-562)	8.5 (8.2-8.8)	25.2 (25.0-25.4)
100	100	8.17-8.63	415 (368-461)	8.6 (8.3-8.8)	25.2 (25.0-25.4)

Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )	Ammonia (mg/L)
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Control	180	120	<0.01
EW01	170	180	<0.01

## EFFLUENT ARRIVAL INFORMATION

Collection Dates and Times	Use Dates	Temperature (°C)	pH	Conductivity (umhos/cm)	DO (mg/L)	Description	Method of Shipment
10/25/94 7/23/03	10/28/94 - 11/04/9	1	7.83	356	8.6	Clear	Overnight Courier

**TEST SUMMARY: SC-EW01-TX-001 94**  
***Pimephales promelas* 48-Hour Static Acute**

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Test protocol:	WCC - SOP 410.2
Test organism:	<i>Pimephales promelas</i>
Source:	Woodward-Clude Consultants
Age of test organism:	6 days
Test initiation:	10/26/1994 @ 1630
Test termination:	10/28/1994 @ 1610
Temperature:	25 +/- 1°C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	500 mL plastic beaker
Test volume:	250 mL
Organisms/replicate:	10
Replicates/concentration:	2
Feeding regime:	none
Aeration during test:	none
Dilution Water:	Hard Reconstituted Synthetic
Test duration:	48 hours
Effect measured:	Mortality
Reference Toxicant Data:	
LC <sub>50</sub> (g/L NaCl):	6.52

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**TEST RESULTS: SC-EW01-TX-001 94**  
***Pimephales promelas* 48-Hour Static Acute**

LC<sub>50</sub>>100%

Statistical analysis method: N/A

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )	Ammonia (mg/L)
Control	100	7.95-8.27	541 (480-601)	8.0 (7.8-8.2)	24.0-25.2	180	120	<0.01
6.25	100	8.25-8.27	531 (477-584)	8.1 (7.9-8.2)	24.0-25.2			
12.5	100	8.25-8.27	526 (480-571)	8.2 (8.0-8.3)	24.0-25.2			
25	100	8.17-8.31	494 (440-548)	8.3 (8.0-8.5)	24.0-25.2			
50	100	8.01-8.39	468 (422-514)	8.3 (8.0-8.5)	24.0-25.2			
100	100	7.83-8.51	398 (356-440)	8.4 (8.1-8.6)	24.0-25.2	170	180	<0.01

**SURFACE WATER SAMPLE ARRIVAL INFORMATION**

<b>Collection Date/Time:</b>	10/25/94 @ 1300
<b>Use Date/Time:</b>	10/26/94 @ 1630
<b>Method of Shipment:</b>	Overnight Courier
<b>Temperature (°C):</b>	1
<b>pH:</b>	7.83
<b>Ammonia (mg/L):</b>	<0.01
<b>Conductivity (umhos/cm):</b>	356
<b>DO (mg/L):</b>	8.6
<b>Description:</b>	Clear

**TEST SUMMARY: SC-EW01-TX-001 94**  
***Pimephales promelas* Chronic Renewal**

---

Test protocol:	WCC - SOP 510.1
Test organism:	<i>Pimephales promelas</i>
Source:	Enviromental Consulting & Testing
Age of test organism:	<24 hours
Test initiation:	10/28/94 @ 1700
Test termination:	11/04/94 @ 1450
Temperature:	25 +/- 1°C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	500 mL plastic beaker
Test volume:	250 mL
Organisms/replicate:	10
Replicates/concentration:	4
Feeding regime:	0.1 brine shrimp nauplii twice daily
Aeration during test:	none
Dilution Water:	Hard Reconstituted Synthetic
Test duration:	7 days
Effect measured:	Survival and growth
Toxicity test methods and procedures were followed in accordance with EPA 600/4-89/001	
Reference Toxicant Data:	
NOEC (g/L NaCl):	3

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**TEST RESULTS : SC-EW01-TX-001 94**  
***Pimephales promelas* Chronic Survival and Growth Test**

**Survival NOEC:**

Statistical analysis method:	>100%
Normality test:	Steel's Many-One Rank
Homogeneity of variance test:	Pass

**Growth NOEC:**

Statistical analysis method:	100%
Normality test:	Dunnett's
Homogeneity of variance test:	Pass
	Pass

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Control	97.5	8.04-8.93	489 (367-550)	8.3 (7.8-8.7)	25.2 (24.9-25.4)
6.25	100	8.10-8.62	382 (350-414)	8 (7.2-8.8)	25.2 (24.9-25.4)
12.5	92.5	8.12-8.69	367 (326-407)	7.9 (7.0-8.8)	25.2 (24.9-25.4)
25	97.5	8.14-8.62	410 (346-473)	7.8 (6.7-8.8)	25.2 (24.9-25.4)
50	97.5	8.15-8.57	385 (346-423)	7.8 (6.8-8.8)	25.2 (24.9-25.4)
100	97.5	8.14-8.47	383 (343-423)	7.9 (7.0-8.8)	25.2 (24.9-25.4)

SC-EW01-TX-001 94	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )	Ammonia (mg/L)
	170	180	<0.01

**TEST SUMMARY: SC-EW02-TX-001 94**  
***Ceriodaphnia dubia* 48-Hour Static Acute**

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Test protocol:	WCC - SOP 401.1
Test organism:	<i>Ceriodaphnia dubia</i>
Source:	WCC Culture Laboratory
Age of test organism:	<24 hours
Test initiation:	10/26/1994 @ 1630
Test termination:	10/28/1994 @ 1615
Temperature:	25 +/- 1 °C
Light:	50-100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	30 mL styrene
Test volume:	20 mL
Organisms/replicate:	5
Replicates/concentration:	4
Feeding regime:	none
Aeration during test:	none
Dilution Water:	Hard Reconstituted Synthetic
Test duration:	48 hours
Effect measured:	Mortality
Reference Toxicant Data:	
LC <sub>50</sub> (g/L NaCl):	2.46

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**TEST RESULTS:SC-EW02 -TX-001-94**  
***Ceriodaphnia dubia* 48-Hour Static Acute**

LC<sub>50</sub>>100

Statistical analysis method: N/A

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )
Control	100	7.95-8.27	541 (480-601)	8 (7.8-8.2)	24.0-25.4	180	120
6.25	95	8.27-8.34	479 (472-485)	8.2 (8.0-8.3)	24.0-25.4		
12.5	95	8.27-8.36	506 (447-565)	8.2 (8.0-8.4)	24.0-25.4		
25	100	8.28-8.34	490 (445-534)	8.3 (8.1-8.5)	24.0-25.4		
50	100	8.22-8.34	461 (435-487)	8.4 (8.1-8.6)	24.0-25.4		
100	100	8.07-8.42	371 (333-409)	8.4 (8.1-8.7)	24.0-25.4	160	180

**SURFACE WATER SAMPLE ARRIVAL INFORMATION**

<b>Collection Date/Time:</b>	10/25/94 @ 930
<b>Use Date/Time:</b>	10/26/94 @ 1630
<b>Method of Shipment:</b>	Overnight courier
<b>Temperature (°C):</b>	2.5
<b>pH:</b>	8.07
<b>Ammonia (mg/L):</b>	<40ppb
<b>Conductivity (umhos/cm):</b>	333
<b>DO (mg/L):</b>	8.7

**TEST SUMMARY: SC-EW02-TX-001 94**  
***Ceriodaphnia dubia* Chronic Renewal**

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Test protocol:	WCC - SOP 501.1
Test organism:	<i>Ceriodaphnia dubia</i>
Source:	WCC Culture Laboratory
WCC Batch:	10/25/94 to 10/26/94
Age of test organism:	< 24 hours
Test initiation:	10/26/1994 @ 1600
Test termination:	10/28/1994 @ 1300
Temperature:	25 +/- 1°C
Light:	50-100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	30 mL styrene
Test volume:	15 mL
Organisms/replicate:	1
Replicates/concentration:	10
Feeding regime:	0.05 mL <i>Selenastrum</i> and 0.05 mL YTC daily
Aeration during test:	none
Dilution Water:	Hard Reconstituted Synthetic
Test duration:	7 days
Effect measured:	Survival and reproduction
Toxicity test methods and procedures were followed in accordance with EPA 600/4-89/001	
Reference Toxicant Data:	
NOEC (g/L NaCl):	0.5

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**TEST RESULTS: SC-EWO2-TX-001 94**  
***Ceriodaphnia dubia* Chronic Survival and Reproduction Test**

**Survival NOEC:**

Statistical analysis method:	>100%
Normality test:	Steel's Many-One Rank
Homogeneity of variance test:	Fail

**Reproduction NOEC:**

Statistical analysis method:	>100%
Normality test:	Dunnett's
Homogeneity of variance test:	Pass

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Control	100	7.80-8.53	556 (379-736)	8.4 (8.0-8.7)	25.3 (25.0-25.6)
6.25	100	8.06-8.59	572 (438-705)	8.5 (8.3-8.6)	25.3 (25.0-25.6)
12.5	100	8.32-8.59	571 (432-710)	8.5 (8.3-8.6)	25.3 (25.0-25.6)
25	100	8.32-8.58	543 (463-623)	8.5 (8.3-8.6)	25.3 (25.0-25.6)
50	80	8.32-8.57	481 (415-546)	8.5 (8.3-8.7)	25.3 (25.0-25.6)
100	100	8.26-8.59	355 (298-411)	8.6 (8.3-8.8)	25.3 (25.0-25.6)

	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )	Ammonia (mg/L)
Control	180	120	<0.01
EW02	160	180	<40 ppb

## EFFLUENT ARRIVAL INFORMATION

Collection Dates and Times	Use Dates	Temperature (°C)	pH	Conductivity (umhos/cm)	DO (mg/L)	Description	Method of Shipment
10/25/94 7/18/02	10/26/94 - 11/04/9	2.5 C	8.07	333	8.7	Clear	Overnight courier

**TEST SUMMARY: SC-EW02-TX-001 94**  
***Pimephales promelas* 48-Hour Static Acute**

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Test protocol:	WCC - SOP 410.2
Test organism:	<i>Pimephales promelas</i>
Source:	Woodward-Clyde Consultants
Age of test organism:	6 days
Test initiation:	10/26/1994 @ 1630
Test termination:	10/28/1994 @ 1610
Temperature:	20 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	500 mL plastic beaker
Test volume:	259 mL
Organisms/replicate:	10
Replicates/concentration:	2
Feeding regime:	none
Aeration during test:	none
Dilution Water:	Hard Reconstituted Synthetic
Test duration:	48 hours
Effect measured:	Mortality
Reference Toxicant Data:	
LC <sub>50</sub> (g/L NaCl):	6.52

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**TEST RESULTS: SC-EW02-TX-001 94**  
***Pimephales promelas* 48-Hour Static Acute**

LC<sub>50</sub> >100%  
 Statistical analysis method: N/A

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )	Ammonia (mg/L)
Control	100	7.95-8.27	541 (480-601)	8.0 (7.8-8.2)	24.0-25.4	180	120	<0.01
6.25	100	8.27-8.34	479 (472-485)	8.2 (8.0-8.3)	24.0-25.4			
12.5	100	8.27-8.36	506 (447-565)	8.2 (98.0-8.4)	24.0-25.4			
25	100	8.28-8.34	490 (445-534)	8.3 (8.1-8.5)	24.0-25.4			
50	100	8.22-8.34	461 (435-487)	8.4 (8.1-8.6)	24.0-25.4			
100	100	8.07-8.42	371 (333-409)	8.4 (8.1-8.7)	24.0-25.4	160	180	<40ppb

**SURFACE WATER SAMPLE ARRIVAL INFORMATION**

<b>Collection Date/Time:</b>	10/25/94 @ 930
<b>Use Date/Time:</b>	10/26/94 @ 1630
<b>Method of Shipment:</b>	Overnight courier
<b>Temperature (°C):</b>	2.5
<b>pH:</b>	8.07
<b>Ammonia (mg/L):</b>	<40ppb
<b>Conductivity (umhos/cm):</b>	333
<b>DO (mg/L):</b>	8.7
<b>Description:</b>	Clear

**TEST SUMMARY: SC-EW02-TX-001 94**  
***Pimephales promelas* Chronic Renewal**

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Test protocol:	WCC - SOP 510.1
Test organism:	<i>Pimephales promelas</i>
Source:	Enviromental Consulting & Testing
Age of test organism:	<24 hours
Test initiation:	10/26/1994 @ 1630
Test termination:	11/4/1994 @ 1610
Temperature:	25 +/- 1°C
Light:	50-100 foot candles
Photoperiod:	16 hours light.8 hours dark
Test vessel:	500 mL plastic beaker
Test volume:	250 mL
Organisms/replicate:	10
Replicates/concentration:	4
Feeding regime:	0.1 mL brine shromp nauplii twice daily
Aeration during test:	none
Dilution Water:	Hard Reconstituted Synthetic
Test duration:	7 days
Effect measured:	Survival and growth
Toxicity test methods and procedures were followed in accordance with EPA 600/4-89/001	
Reference Toxicant Data:	
NOEC (g/L NaCl):	3

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**TEST RESULTS :SC-EW02-TX-001 94**  
***Pimephales promelas* Chronic Survival and Growth Test**

**Survival NOEC:**

Statistical analysis method:	>100%
Normality test:	Steel's Many-One Rank
Homogeneity of variance test:	Fail

**Growth NOEC:**

Statistical analysis method:	6.25%
Normality test:	Dunnett's
Homogeneity of variance test:	Pass
	Pass

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Control	100	8.04-8.93	489 (367-550)	8.3 (7.8-8.7)	25.0 (24.5-25.4)
6.25	100	8.10-8.65	351 (296-406)	8.1 (7.3-8.8)	25.0 (24.5-25.4)
12.5	100	8.10-8.65	359 (319-399)	8.1 (7.3-8.8)	25.0 (24.5-25.4)
25	95	8.12-8.67	352 (313-391)	8.1 (7.3-8.8)	25.0 (24.5-25.4)
50	100	8.17-8.60	352 (306-398)	8.1 (7.3-8.8)	25.0 (24.5-25.4)
100	100	8.17-8.50	352 (302-402)	8.1 (7.3-8.9)	25.0 (24.5-25.4)

SC-EW02-TX-001 94	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )	Ammonia (mg/L)
	160	180	<40 ppb

**TEST SUMMARY: SC-EWO3-TX-001 94**  
***Ceriodaphnia dubia* 48-Hour Static Acute**

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Test protocol:	WCC - SOP 401.2
Test organism:	<i>Ceriodaphnia dubia</i>
Source:	WCC Culture Laboratory
Age of test organism:	<24 hours
Test initiation:	10/26/1994 @ 1630
Test termination:	10/28/1994 @ 1620
Temperature:	25 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	30 mL styrene
Test volume:	20 mL
Organisms/replicate:	5
Replicates/concentration:	4
Feeding regime:	none
Aeration during test:	none
Dilution Water:	Hard Reconstituted Synthetic
Test duration:	48 hours
Effect measured:	Mortality
Reference Toxicant Data:	
LC <sub>50</sub> (g/L NaCl):	2.46

---

**TEST RESULTS: SC-EW03-TX-001 94**  
***Ceriodaphnia dubia* 48-Hour Static Acute**

LC<sub>50</sub>>100%

Statistical analysis method: N/A

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )
Control	100	7.95-8.27	541 (480-601)	8 (7.8-8.2)	24.0-25.4	180	120
6.25	95	8.25-8.42	537 (493-581)	8.2 (8.2-8.2)	24.0-25.4		
12.5	90	8.26-8.42	524 (477-571)	8.4 (8.2-8.5)	24.0-25.4		
25	100	8.30-8.37	511 (475-546)	8.4 (8.3-8.5)	24.0-25.4		
50	100	8.29-8.34	468 (435-500)	8.5 (8.3-8.6)	24.0-25.4		
100	100	8.13-8.46	370 (330-410)	8.5 (8.3-8.7)	24.0-25.4	170	180

**SURFACE WATER SAMPLE ARRIVAL INFORMATION**

<b>Collection Date/Time:</b>	10/25/94 @ 845
<b>Use Date/Time:</b>	10/26/94-11/04/94
<b>Method of Shipment:</b>	Overnight courier
<b>Temperature (°C):</b>	1.5
<b>pH:</b>	8.13
<b>Ammonia (mg/L):</b>	<40 ppb
<b>Conductivity (umhos/cm):</b>	330
<b>DO (mg/L):</b>	8.7



**TEST SUMMARY: SC-EW03-TX-001 94**  
***Ceriodaphnia dubia* Chronic Renewal**

---

<b>Test protocol:</b>	WCC - SOP 501.1
<b>Test organism:</b>	<i>Ceriodaphnia dubia</i>
<b>Source:</b>	WCC Laboratory
<b>WCC Batch:</b>	10/25/94 to 10/26/94
<b>Age of test organism:</b>	<24 hours
<b>Test initiation:</b>	10/26/1994 @ 1620
<b>Test termination:</b>	11/4/1994 @ 1355
<b>Temperature:</b>	25 +/- 1°C
<b>Light:</b>	50 - 100 foot candles
<b>Photoperiod:</b>	16 hours light/8 hours dark
<b>Test vessel:</b>	30 mL styrene
<b>Test volume:</b>	15 mL
<b>Organisms/replicate:</b>	1
<b>Replicates/concentration:</b>	10
<b>Feeding regime:</b>	0.05 mL <i>Seleastrum</i> and 0.05 mL YTC daily
<b>Aeration during test:</b>	none
<b>Dilution Water:</b>	Hard Reconstituted Synthetic
<b>Test duration:</b>	7 days
<b>Effect measured:</b>	Survival and reproduction
Toxicity test methods and procedures were followed in accordance with EPA 600/4-89/001	
<b>Reference Toxicant Data:</b>	
NOEC (g/L NaCl):	0.5

---

**TEST RESULTS: SC-EW03-TX-001 94**  
***Ceriodaphnia dubia* Chronic Survival and Reproduction Test**

**Survival NOEC:**

Statistical analysis method:	>100%
Normality test:	Steel's Many-One Rank
Homogeneity of variance test:	Fail

**Reproduction NOEC:**

Statistical analysis method:	>100%
Normality test:	Dunnett's
Homogeneity of variance test:	Pass

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Control	100	7.80-8.53	556 (379-736)	8.4 (8.0-8.7)	25.2 (25.0-25.4)
6.25	100	8.30-8.59	560 (464-666)	8.4 (8.0-8.7)	25.2 (25.0-25.4)
12.5	90	8.29-8.60	575 (483-666)	8.3 (8.0-8.6)	25.2 (25.0-25.4)
25	100	8.30-8.60	560 (462-658)	8.5 (8.2-8.7)	25.2 (25.0-25.4)
50	100	8.32-8.57	479 (417-541)	8.5 (8.2-8.8)	25.2 (25.0-25.4)
100	100	8.07-8.56	343 (301-384)	8.6 (8.3-8.8)	25.2 (25.0-25.4)

Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )	Ammonia (mg/L)
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Control	180	120	<0.01
EW03	170	180	<40PPB

## EFFLUENT ARRIVAL INFORMATION

Collection Dates and Times	Use Dates	Temperature (°C)	pH	Conductivity (umhos/cm)	DO (mg/L)	Description	Method of Shipment
10/25/94 4/24/02	10/26/94 - 11/04/9	2.5	8.13	330	8.7	CLEAR	Overnight courier

**TEST SUMMARY: SC-EW03-TX-001 94**  
***Pimephales promelas* 48-Hour Static Acute**

---

Test protocol:	WCC - SOP 410.2
Test organism:	<i>Pimephales promelas</i>
Source:	Woodward-Clyde Consultants
Age of test organism:	6 days
Test initiation:	10/26/1994 @ 1630
Test termination:	10/28/1994 @ 1610
Temperature:	20 +/- 1°C
Light:	50 -100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	500 mL plastic beaker
Test volume:	250 mL
Organisms/replicate:	10
Replicates/concentration:	2
Feeding regime:	none
Aeration during test:	none
Dilution Water:	Hard Reconstituted Synthetic
Test duration:	48 hours
Effect measured:	Mortality
Reference Toxicant Data:	
LC <sub>50</sub> (g/L NaCl):	6.52

---

**TEST RESULTS: SC-EW03-TX-001 94**  
***Pimephales promelas* 48-Hour Static Acute**

LC<sub>50</sub> >100%  
 Statistical analysis method: N/A

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )	Ammonia (mg/L)
Control	100	7.95-8.27	541 (480-601)	8.0 (7.8-8.2)	24.0-25.4	180	120	<0.01
6.25	100	8.25-8.42	537 (493-581)	8.2 (8.2-8.2)	24.0-25.4			
12.5	100	8.26-8.42	524 (477-571)	8.4 (8.2-8.5)	24.0-25.4			
25	100	8.30-8.37	511 (475-546)	8.4 (8.3-8.5)	24.0-25.4			
50	100	8.29-8.34	468 (435-500)	8.5 (8.3-8.6)	24.0-25.4			
100	100	8.13-8.46	370 (330-410)	8.5 (8.3-8.7)	24.0-25.4	170	180	<40ppb

**SURFACE WATER SAMPLE ARRIVAL INFORMATION**

<b>Collection Date/Time:</b>	10/25/94 @ 845
<b>Use Date/Time:</b>	10/26/94-11/04/94
<b>Method of Shipment:</b>	Overnight courier
<b>Temperature (°C):</b>	1.5
<b>pH:</b>	8.13
<b>Ammonia (mg/L):</b>	<40ppb
<b>Conductivity (umhos/cm):</b>	330
<b>DO (mg/L):</b>	8.7
<b>Description:</b>	clear

**TEST SUMMARY: SC-EW03-TX-001 94**  
***Pimephales promelas* Chronic Renewal**

---

Test protocol:	WCC - SOP 510.1
Test organism:	<i>Pimephales promelas</i>
Source:	Enviromental Consulting & Testing
Age of test organism:	<24 hours
Test initiation:	10/28/1994 @ 1645
Test termination:	11/4/1994 @ 1715
Temperature:	25 +/- 1°C
Light:	50 -100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	500 mL plastic beaker
Test volume:	250 mL
Organisms/replicate:	10
Replicates/concentration:	4
Feeding regime:	0.1 mL brine shrimp nauplii twice daily
Aeration during test:	none
Dilution Water:	Hard Reconstituted Synthetic
Test duration:	7 days
Effect measured:	Survival and Growth
Toxicity test methods and procedures were followed in accordance with EPA 600/4-89/001	
Reference Toxicant Data:	
NOEC (g/L NaCl):	3

---

**TEST RESULTS -SC-EW03-TX-001 94**  
***Pimephales promelas* Chronic Survival and Growth Test**

**Survival NOEC:**

Statistical analysis method:	>100%
Normality test:	Steel's Many-One Rank
Homogeneity of variance test:	Fail

**Growth NOEC:**

Statistical analysis method:	6.25%
Normality test:	Dunnett's
Homogeneity of variance test:	Pass

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Control	97.5	8.04-8.93	489 (367-550)	8.3 (7.8-8.7)	25.2 (24.9-25.4)
6.25	100	7.84-8.66	377 (348-395)	8 (7.2-8.8)	25.2 (24.9-25.4)
12.5	100	7.95-8.66	361 (334-388)	8.1 (7.3-8.8)	25.2 (24.9-25.4)
25	97.5	7.98-8.65	358 (330-386)	8.1 (7.3-8.8)	25.2 (24.9-25.4)
50	97.5	8.01-8.61	361 (330-391)	8.1 (7.4-8.8)	25.2 (24.9-25.4)
100	100	8.07-8.58	353 (321-384)	8.2 (7.4-8.9)	25.2 (24.9-25.4)

SC-EW03-TX-001 94	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )	Ammonia (mg/L)
	170	180	<40PPB



**TEST SUMMARY: CR-EC01-TX-201**

***Lumbriculus variegatus* Static Acute  
(Second Ecological Sampling Event)**

---

Test protocol: WCC SOP E9

Test organism: *Lumbriculus variegatus*

Source: WCC Culture Laboratory

Age of test organism: Adult

Test initiation: 6/26/95

Test termination: 6/30/95

Temperature: 20 +/- 1 °C

Light: 50 - 100 foot candles

Photoperiod: 16 hours light/8 hours dark

Test vessel: 300 mL glass beaker

Sediment Test volume: 100 cm<sup>3</sup>

Organisms/replicate: 10

Replicates/concentration: 4

Feeding regime: none

Aeration during test: none

Dilution Sediment: Gravel mix

Overlying water: Spring water

Test duration: 96 hours

Effect measured: Mortality

Reference Toxicant Data:  
LC<sub>50</sub> (g/L NaCl): 0.77

---

**TEST RESULTS: CR-EC01-TX-201**  
***Lumbriculus variegatus* 96-Hour Static Acute**  
(Second Ecological Sampling Event)

LC<sub>50</sub> >100%

Statistical analysis method: N/A

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Control	100.00%	7.11	204	5.2 (2.5-6.7)	22.9 (21.2-23.8)
6.25	95.00%	7.69	338	4.8 (2.3-5.9)	22.9 (21.8-24.0)
12.5	100.00%	7.68	351	5.1 (2.2-6.1)	22.9 (21.8-23.8)
25	87.50%	7.50	375	4.8 (1.8-6.36)	23.1 (22.0-24.0)
50	97.50%	7.55	358	4.2 (0.9-6.4)	22.9 (21.8-24.0)
100	92.50%	8.12	340	5.5 (4.1-6.5)	70.5 (22.0-24.0)

**SEDIMENT SAMPLE ARRIVAL INFORMATION**

**Collection Date/Time:** 6/13/95 @ 1300

**Method of Shipment:** Overnight Courier

**Temperature (°C):** 2.0

**TEST SUMMARY: CR-EC01-TX-201**  
***Hyallela azteca* 96 Hour Static Acute**  
**(Second Ecological Sampling Event)**

---

Test protocol:	WCC SOP E7
Test organism:	<i>Hyallela azteca</i>
Source:	Woodward-Clyde Consultants
Age of test organism:	Third instar
Test initiation:	6/26/95
Test termination:	6/30/95
Temperature:	25 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	500 mL glass beaker
Sediment Test volume:	100 cm <sup>3</sup>
Organisms/replicate:	10
Replicates/concentration:	3
Feeding regime:	none
Aeration during test:	none
Dilution sediment:	Gravel
Overlying:	Spring water
Test duration:	96 hours
Effect measured:	Mortality
Reference Toxicant Data: LC <sub>50</sub> (g/L NaCl):	0.67

---

**TEST RESULTS: CR-EC01-TX-201**  
***Hyallela azteca* 96-Hour Static Acute**  
(Second Ecological Sampling Event)

$LC_{50} > 100\%$

Statistical analysis method: N/A

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Control	93.33%	7.35	336	4.9 (2.1-6.6)	23.3 (22.0-24.1)
6.25	96.67%	7.60	362	4.6 (2.2-5.7)	23.3 (22.0-24.1)
12.5	96.67%	7.24	367	4.4 (0.7-5.8)	23.4 (22.0-24.0)
25	90.00%	7.32	378	3.8 (0.8-5.7)	23.4 (22.0-24.5)
50	96.67%	7.17	412	3.7 (0.5-6.0)	23.5 (22.0-24.2)
100	86.67%	7.61	369	5.2 (2.6-7.0)	23.2 (21.6-24.0)

**SURFACE WATER SAMPLE ARRIVAL INFORMATION**

**Collection Date/Time:** 6/13/95 @ 1245

**Method of Shipment:** Overnight Courier

**Temperature (°C):** 2.0

**TEST SUMMARY: CR-EC01-TX-201**  
***Hyalella azteca* Chronic Sediment**  
**(Second Ecological Sampling Event)**

---

Test protocol:	WCC SOP E7
Test organism:	<i>Hyalella azteca</i>
Source:	WCC
Age of test organism:	second instar
Test initiation:	8/15/95
Test termination:	9/12/95
Temperature:	25 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	500 mL glass beaker
Sediment Test volume:	100 cm <sup>3</sup>
Organisms/replicate:	10
Replicates/concentration:	3
Feeding regime:	YTC/leaf slurry/algae
Aeration during test:	none
Dilution sediment:	Gravel
Water:	Spring Water
Test duration:	28 days
Effect measured:	Survival, growth, and reproduction
Reference Toxicant Data: NOEC (g/L KCl):	0.67

---

**TEST RESULTS : CR- EC01-TX-201**  
***Hyalella azteca* Chronic Survival and Growth Test**  
(Second Ecological Sampling Event)

**LC50** >100%

**Survival NOEC:** 100%

Statistical analysis method: Dunnett's

Normality test: Pass

Homogeneity of variance test: Pass

**Growth NOEC:** 100%

Statistical analysis method: Bonferroni T-Test

Normality test: Pass

Homogeneity of variance test: Pass

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Silt	66.7	7.15-7.99	343	5.6	22.8
Control	66.7	7.58-8.07	(241-444)	(3.6-7.6)	(20.5-25.0)
6.25	66.7	7.58-8.07	339	5.6	22.8
			(231-446)	(3.8-7.4)	(21.0-24.5)
12.5	90	7.62-8.07	338	5.5	23.1
			(237-438)	(3.5-7.4)	(21.1-25.0)
25	70	7.72-8.08	345	5.6	23.0
			(237-452)	(3.8-7.4)	(21.0-25.0)
50	63.3	7.69-8.11	357	5.4	22.7
			(233-480)	(3.5-7.3)	(20.9-24.5)
100	83.3	7.64-8.11	324	5.6	23.0
			(235-413)	(3.9-7.3)	(20.9-25.0)

**TEST SUMMARY: CR-EC02-TX-201**

***Lumbriculus variegatus* Static Acute  
(Second Ecological Sampling Event)**

---

Test protocol: WCC SOP E9

Test organism: *Lumbriculus variegatus*

Source: WCC Culture Laboratory

Age of test organism: Adult

Test initiation: 6/21/95

Test termination: 6/25/95

Temperature: 20 +/- 1 °C

Light: 50 - 100 foot candles

Photoperiod: 16 hours light/8 hours dark

Test vessel: 300 mL glass beaker

Sediment Test volume: 100 cm<sup>3</sup>

Organisms/replicate: 10

Replicates/concentration: 4

Feeding regime: none

Aeration during test: none

Dilution Sediment: Silt mix

Overlying water: Spring water

Test duration: 96 hours

Effect measured: Mortality

Reference Toxicant Data:  
LC<sub>50</sub> (g/L NaCl): 0.77

---

**TEST RESULTS: CR-EC02-TX-201**  
***Lumbriculus variegatus* 96-Hour Static Acute**  
**(Second Ecological Sampling Event)**

LC<sub>50</sub> >100%

Statistical analysis method: N/A

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Control	100.00%	7.27	349	4.5 (2.3-7.2)	22.4 (21.6-23.0)
6.25	97.50%	7.23	393	4.3 (0.8-6.8)	22.4 (21.9-23.0)
12.5	100.00%	7.34	371	3.8 (1.3-6.6)	21.8 (21.5-22.1)
25	97.50%	7.32	384	3.9 (1.0-6.4)	22.5 (21.5-23.0)
50	100.00%	7.41	405	3.9 (1.3-6.3)	22.1 (21.0-23.0)
100	97.50%	7.83	347	5.5 (4.0-6.8)	21.7 (21.0-22.0)

**SEDIMENT SAMPLE ARRIVAL INFORMATION**

**Collection Date/Time:** 6/12/95 @ 1430

**Method of Shipment:** Overnight Courier

**Temperature (°C):** 2.0

**TEST SUMMARY: CR-EC02-TX-201**

***Hyallela azteca* 96 Hour Static Acute  
(Second Ecological Sampling Event)**

---

Test protocol: WCC SOP E7

Test organism: *Hyallela azteca*

Source: Woodward-Clyde Consultants

Age of test organism: Third instar

Test initiation: 6/21/95

Test termination: 6/25/95

Temperature: 25 +/- 1 °C

Light: 50 - 100 foot candles

Photoperiod: 16 hours light/8 hours dark

Test vessel: 500 mL glass beaker

Sediment Test volume: 100 cm<sup>3</sup>

Organisms/replicate: 10

Replicates/concentration: 3

Feeding regime: none

Aeration during test: none

Dilution sediment: Gravel

Overlying: Spring water

Test duration: 96 hours

Effect measured: Mortality

Reference Toxicant Data:  
LC<sub>50</sub> (g/L NaCl): 0.67

---

**TEST RESULTS: CR-EC02-TX-201**  
***Hyallela azteca* 96-Hour Static Acute**  
**(Second Ecological Sampling Event)**

LC<sub>50</sub> > 100%

Statistical analysis method: N/A

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Control	86.70%	7.27	349	4.5 (2.3-7.2)	22.4 (21.6-23.0)
6.25	73.33%	7.43	333	4.0 (1.2-6.7)	24.9 (22.8-26.5)
12.5	73.33%	7.37	361	3.9 (0.8-6.6)	25.1 (23.2-26.5)
25	56.67%	7.36	370	3.1 (0.6-6.6)	24.8 (22.0-26.0)
50	73.33%	7.24	399	3.3 (0.4-6.6)	24.7 (22.0-26.1)
100	76.67%	7.69	393	5.3 (4.0-6.4)	25.1 (23.0-26.5)

**SURFACE WATER SAMPLE ARRIVAL INFORMATION**

**Collection Date/Time:** 6/12/95 @ 1430

**Method of Shipment:** Overnight Courier

**Temperature (°C):** 2.0

**TEST SUMMARY: CR-EC02-TX-201**

***Hyalella azteca* Chronic Sediment  
(Second Ecological Sampling Event)**

---

Test protocol:	WCC SOP E7
Test organism:	<i>Hyalella azteca</i>
Source:	WCC
Age of test organism:	second instar
Test initiation:	8/23/95
Test termination:	9/20/95
Temperature:	25 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	500 mL glass beaker
Sediment Test volume:	100 cm <sup>3</sup>
Organisms/replicate:	10
Replicates/concentration:	3
Feeding regime:	YTC/leaf slurry/algae
Aeration during test:	none
Dilution sediment:	Gravel
Water:	Spring water
Test duration:	28 days
Effect measured:	Survival, growth, and reproduction
Reference Toxicant Data:	
NOEC (g/L KCl):	0.67

---

**TEST RESULTS : CR- EC02-TX-201**  
***Hyalella azteca* Chronic Survival and Growth Test**  
**(Second Ecological Sampling Event)**

**LC50** >100%

**Survival NOEC:** 100%  
 Statistical analysis method: Bonferroni T-Test  
 Normality test: Pass  
 Homogeneity of variance test: Pass

**Growth NOEC:** 100%  
 Statistical analysis method: Bonferroni T-Test  
 Normality test: Pass  
 Homogeneity of variance test: Pass

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Silt	83.3	7.55-8.19	366	5.4	22.8
Control			(268-464)	(3.4-7.3)	(20.5-25.0)
6.25	83.3	7.73-8.13	361 (301-420)	5.2 (3.1-7.2)	23.0 (21.2-24.8)
12.5	73.3	7.73-8.09	327 (250-404)	5.0 (2.9-7.0)	23.0 (21.0-25.0)
25	93.3	7.76-8.10	326 (249-402)	5.2 (3.4-7.0)	23.2 (21.9-24.4)
50	86.7	7.73-8.11	355 (248-461)	5.3 (3.6-6.9)	23.2 (21.5-24.8)
100	103	7.80-8.11	345 (242-448)	4.9 (3.0-6.7)	23.0 (21.2-24.8)

**TEST SUMMARY: SC-EE01-TX-201**

***Lumbriculus variegatus* Static Acute  
(Second Ecological Sampling Event)**

---

Test protocol: WCC SOP E9

Test organism: *Lumbriculus variegatus*

Source: WCC Culture Laboratory

Age of test organism: Adult

Test initiation: 6/23/95

Test termination: 6/27/95

Temperature: 20 +/- 1 °C

Light: 50 - 100 foot candles

Photoperiod: 16 hours light/8 hours dark

Test vessel: 300 mL glass beaker

Sediment Test volume: 100 cm<sup>3</sup>

Organisms/replicate: 10

Replicates/concentration: 4

Feeding regime: none

Aeration during test: none

Dilution Sediment: Gravel mix

Test duration: 96 hours

Effect measured: Mortality

Reference Toxicant Data:  
LC<sub>50</sub> (g/L NaCl): 0.77

---

**TEST RESULTS: SC-EE01-TX-201**  
***Lumbriculus variegatus* 96-Hour Static Acute**  
(Second Ecological Sampling Event)  
LC<sub>50</sub> >100%  
Statistical analysis method: N/A

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Control	100.00%	7.42	414	5.2 (4.2-7.4)	23.1 (21.5-24)
6.25	100.00%	7.68	417	4.9 (3.8-7.4)	23.4 (21.8-24.0)
12.5	100.00%	7.56	439	4.8 (3.2-7.2)	23.6 (22.0-26.0)
25	100.00%	7.46	400	4.4 (1.7-7.6)	23.4 (22.5-24.0)
50	97.50%	7.43	442	4.9 (1.2-7.2)	23.1 (22.2-24.0)
100	100.00%	8.06	401	5.9 (5.0-7.4)	22.8 (21.8-24.0)

**SEDIMENT SAMPLE ARRIVAL INFORMATION**

**Collection Date/Time:** 6/12/95 @ 1000  
**Method of Shipment:** Overnight Courier  
**Temperature (°C):** 2.0

**TEST SUMMARY: SC-EE01-TX-201**  
***Hyallela azteca* 96 Hour Static Acute**  
**(Second Ecological Sampling Event)**

---

Test protocol:	WCC SOP E7
Test organism:	<i>Hyallela azteca</i>
Source:	Woodward-Clyde Consultants
Age of test organism:	Third instar
Test initiation:	6/23/95
Test termination:	6/27/95
Temperature:	25 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	500 mL glass beaker
Sediment Test volume:	100 cm <sup>3</sup>
Organisms/replicate:	10
Replicates/concentration:	3
Feeding regime:	none
Aeration during test:	none
Dilution sediment:	Gravel
Overlying:	Spring water
Test duration:	96 hours
Effect measured:	Mortality
Reference Toxicant Data: LC <sub>50</sub> (g/L NaCl):	0.67

---

**TEST RESULTS: SC-EE01-TX-201**  
***Hyallela azteca* 96-Hour Static Acute**  
 (Second Ecological Sampling Event)

LC<sub>50</sub> > 100%

Statistical analysis method: N/A

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Control	96.67%	7.42	552	4.4 (3.0-7.3)	25.1 (24.2-26.0)
6.25	100.00%	7.57	452	4.2 (2.2-7.3)	24.6 (23.2-26.0)
12.5	90.00%	7.46	506	3.3 (1.7-7.1)	24.9 (24.0-26.0)
25	96.67%	7.45	485	4.0 (1.2-7.4)	24.4 (23.0-26.8)
50	86.67%	7.46	470	3.7 (1.2-7.3)	24.7 (24.4-25.0)
100	60.00%	7.94	405	5.3 (4.5-7.2)	24.6 (24.2-25.0)

**SURFACE WATER SAMPLE ARRIVAL INFORMATION**

**Collection Date/Time:** 6/12/95 @ 1000

**Method of Shipment:** Overnight Courier

**Temperature (°C):** 2.0

**TEST SUMMARY: SC-EE01-TX-201**

***Hyalella azteca* Chronic Sediment  
(Second Ecological Sampling Event)**

---

Test protocol:	WCC SOP E7
Test organism:	<i>Hyalella azteca</i>
Source:	WCC
Age of test organism:	second instar
Test initiation:	8/16/95
Test termination:	9/13/95
Temperature:	25 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	500 mL glass beaker
Sediment Test volume:	100 cm <sup>3</sup>
Organisms/replicate:	10
Replicates/concentration:	3
Feeding regime:	YTC/leaf slurry/algae
Aeration during test:	none
Dilution sediment:	Gravel
Water:	Spring Water
Test duration:	28 days
Effect measured:	Survival, growth, and reproduction
Reference Toxicant Data:	
NOEC (g/L KCl):	0.67

---

**TEST RESULTS : SC- EE01-TX-201**  
***Hyalella azteca* Chronic Survival and Growth Test**  
(Second Ecological Sampling Event)

**LC50** 100%

<b>Survival NOEC:</b>	50%
Statistical analysis method:	Bonferroni T-Test
Normality test:	Pass
Homogeneity of variance test:	Pass
<b>Growth NOEC:</b>	100%
Statistical analysis method:	Bonferroni T-Test
Normality test:	Pass
Homogeneity of variance test:	Pass

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Gravel Control	82	7.40-8.21	343 (257-429)	5.5 (3.2-7.7)	23.2 (21.7-24.7)
6.25	73.3	7.67-8.17	371 (246-495)	5.5 (3.4-7.6)	23.1 (21.5-24.6)
12.5	90	7.50-8.21	325 (239-410)	5.6 (3.4-7.7)	22.5 (20.5-24.4)
25	86.7	7.54-8.20	337 (227-447)	5.6 (3.4-7.7)	23.4 (21.8-25.0)
50	76.7	7.52-8.19	336 (240-431)	5.3 (3.0-7.5)	22.5 (20.8-24.2)
100	50	7.53-8.18	311 (243-378)	5.2 (3.1-7.3)	22.7 (20.5-24.8)

**TEST SUMMARY: SC-EE02-TX-201**  
***Lumbriculus variegatus* Static Acute**  
**(Second Ecological Sampling Event)**

---

Test protocol:	WCC SOP E9
Test organism:	<i>Lumbriculus variegatus</i>
Source:	WCC Culture Laboratory
Age of test organism:	Adult
Test initiation:	6/23/95
Test termination:	6/27/95
Temperature:	20 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	300 mL glass beaker
Sediment Test volume:	100 cm <sup>3</sup>
Organisms/replicate:	10
Replicates/concentration:	4
Feeding regime:	none
Aeration during test:	none
Dilution Sediment:	Gravel mix
Overlying water:	Spring water
Test duration:	96 hours
Effect measured:	Mortality
Reference Toxicant Data: LC <sub>50</sub> (g/L NaCl):	0.77

---

**TEST RESULTS: SC-EE02-TX-201**  
***Lumbriculus variegatus* 96-Hour Static Acute**  
**(Second Ecological Sampling Event)**

$LC_{50} > 100\%$

Statistical analysis method: N/A

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Control	100.00%	7.42	414	5.2 (4.2-7.4)	23.1 (21.5-24)
6.25	95.00%	7.65	450	4.9 (3.5-7.4)	23.7 (22.0-24.8)
12.5	100.00%	7.62	418	4.5 (2.9-7.4)	23.3 (22.0-23.8)
25	100.00%	7.46	435	4.0 (1.3-7.2)	22.1 (20.2-23.5)
50	92.50%	7.39	445	4.3 (1.4-6.9)	23.6 (22.0-25.0)
100	100.00%	7.81	399	5.5 (5.2-6.7)	22.1 (20.8-23.5)

**SEDIMENT SAMPLE ARRIVAL INFORMATION**

**Collection Date/Time:** 6/12/95 @ 1200

**Method of Shipment:** Overnight Courier

**Temperature (°C):** 3.0

**TEST SUMMARY: SC-EE02-TX-201**  
***Hyallela azteca* 96 Hour Static Acute**  
**(Second Ecological Sampling Event)**

---

Test protocol:	WCC SOP E7
Test organism:	<i>Hyallela azteca</i>
Source:	Woodward-Clyde Consultants
Age of test organism:	Third instar
Test initiation:	6/23/95
Test termination:	6/27/95
Temperature:	25 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	300 mL glass beaker
Sediment Test volume:	100 cm <sup>3</sup>
Organisms/replicate:	10
Replicates/concentration:	3
Feeding regime:	none
Aeration during test:	none
Dilution sediment:	Gravel
Overlying:	Spring water
Test duration:	96 hours
Effect measured:	Mortality
Reference Toxicant Data: LC <sub>50</sub> (g/L NaCl):	0.67

---

**TEST RESULTS: SC-EE02-TX-201**  
***Hyallela azteca* 96-Hour Static Acute**  
**(Second Ecological Sampling Event)**

LC<sub>50</sub> : 75.6%

Statistical analysis method: Probit Analysis

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Control	93.33%	7.42	552	4.4 (3.0-7.3)	25.1 (24.2-26.0)
6.25	80.00%	7.50	487	3.8 (1.7-7.5)	24.3 (23.0-25.0)
12.5	96.67%	7.43	490	3.7 (1.5-7.1)	24.5 (23.5-26.8)
25	93.55%	7.32	495	3.7 (1.0-7.2)	25.3 (24.2-27.0)
50	80.00%	7.38	468	3.3 (0.9-6.9)	24.4 (22.5-27.0)
100	20.00%	7.86	406	5.0 (3.8-7.1)	25.2 (23.5-27.0)

**SURFACE WATER SAMPLE ARRIVAL INFORMATION**

**Collection Date/Time:** 6/12/95 @ 1200

**Method of Shipment:** Overnight Courier

**Temperature (°C):** 3.0

**TEST SUMMARY: SC-EE02-TX-201**

***Hyalella azteca* Chronic Sediment  
(Second Ecological Sampling Event)**

---

Test protocol:	WCC SOP E7
Test organism:	<i>Hyalella azteca</i>
Source:	WCC
Age of test organism:	second instar
Test initiation:	8/16/95
Test termination:	9/13/95
Temperature:	25 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	300 mL glass beaker
Sediment Test volume:	100 cm <sup>3</sup>
Organisms/replicate:	10
Replicates/concentration:	3
Feeding regime:	YTC/leaf slurry/algae
Aeration during test:	none
Dilution Sediment:	Gravel
Water:	Spring water
Test duration:	28 days
Effect measured:	Survival, growth, and reproduction
Reference Toxicant Data:	
NOEC (g/L KCl):	0.67

---

**TEST RESULTS : SC- EE02-TX-201**  
***Hyalella azteca* Chronic Survival and Growth Test**  
**(Second Ecological Sampling Event)**

**LC50** >100%

<b>Survival NOEC:</b>	100%
Statistical analysis method:	Wilcoxon Rank Sum
Normality test:	Fail
Homogeneity of variance test:	Pass
<b>Growth NOEC:</b>	100%
Statistical analysis method:	Bonferroni T-Test
Normality test:	Pass
Homogeneity of variance test:	Pass

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Gravel	82	7.40-8.21	343	5.5	23.2
Control			(257-429)	(3.2-7.7)	(21.7-24.7)
6.25	90	7.56-8.17	353	5	22.9
			(241-464)	(3.0-7.0)	(21.0-24.8)
12.5	90	7.54-8.16	358	5.3	22.8
			(237-478)	(3.5-7.0)	(20.6-24.9)
25	90	7.54-8.10	344	5.4	23.0
			(240-447)	(3.8-6.9)	(21.1-24.8)
50	93.3	7.54-8.13	336	5.0	22.7
			(241-431)	(3.0-7.0)	(21.0-24.4)
100	80	8.10-7.53	308	5.1	22.8
			(238-378)	(2.9-7.2)	(21.0-24.5)

**TEST SUMMARY: SC-EE03-TX-201**

***Lumbriculus variegatus* Static Acute  
(Second Ecological Sampling Event)**

---

Test protocol: WCC SOP E9

Test organism: *Lumbriculus variegatus*

Source: WCC Culture Laboratory

Age of test organism: Adult

Test initiation: 6/23/95

Test termination: 6/27/95

Temperature: 20 +/- 1 °C

Light: 50 - 100 foot candles

Photoperiod: 16 hours light/8 hours dark

Test vessel: 300 mL glass beaker

Sediment Test volume: 100 cm<sup>3</sup>

Organisms/replicate: 10

Replicates/concentration: 4

Feeding regime: none

Aeration during test: none

Dilution Sediment: Gravel mix

Overlying water: Spring water

Test duration: 96 hours

Effect measured: Mortality

Reference Toxicant Data:  
LC<sub>50</sub> (g/L NaCl): 0.77

---

**TEST RESULTS: SC-EE03-TX-201**  
***Lumbriculus variegatus* 96-Hour Static Acute**  
**(Second Ecological Sampling Event)**

$LC_{50} > 100\%$

Statistical analysis method: N/A

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Control	100.00%	7.42	414	5.2 (4.2-7.4)	23.1 (21.5-24)
6.25	100.00%	7.64	441	5.0 (3.8-7.4)	23.0 (22.0-24.0)
12.5	100.00%	7.77	425	5.1 (3.8-7.4)	22.4 (21.8-23.5)
25	97.50%	7.75	428	5.2 (4.2-7.4)	23.4 (21.8-25.0)
50	97.50%	7.70	487	4.7 (1.8-7.4)	23.3 (22.2-24.0)
100	97.50%	8.01	404	6.3 (5.5-7.5)	22.9 (21.5-23.8)

**SEDIMENT SAMPLE ARRIVAL INFORMATION**

**Collection Date/Time:** 6/12/95 @ 0915

**Method of Shipment:** Overnight Courier

**Temperature (°C):** 3.0

**TEST SUMMARY: SC-EE03-TX-201**  
***Hyallela azteca* 96 Hour Static Acute**  
**(Second Ecological Sampling Event)**

---

Test protocol:	WCC SOP E7
Test organism:	<i>Hyallela azteca</i>
Source:	Woodward-Clyde Consultants
Age of test organism:	Third instar
Test initiation:	6/19/95
Test termination:	6/23/95
Temperature:	25 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	500 mL glass beaker
Sediment Test volume:	100 cm <sup>3</sup>
Organisms/replicate:	10
Replicates/concentration:	3
Feeding regime:	none
Aeration during test:	none
Dilution sediment:	Gravel
Overlying:	Spring water
Test duration:	96 hours
Effect measured:	Mortality
Reference Toxicant Data: LC <sub>50</sub> (g/L NaCl):	0.67

---

**TEST RESULTS: SC-EE03-TX-201**  
***Hyallela azteca* 96-Hour Static Acute**  
**(Second Ecological Sampling Event)**

$LC_{50} > 100\%$

Statistical analysis method: N/A

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Control	93.33%	7.42	552	4.4 (3.0-7.3)	25.1 (24.2-26.0)
6.25	100.00%	7.69	403	4.7 (3.2-7.4)	24.9 (24.2-27.0)
12.5	100.00%	7.73	379	4.3 (3.2-7.4)	25.4 (24.2-27.0)
25	90.00%	7.63	409	3.6 (0.7-7.4)	24.4 (23.0-26.8)
50	93.33%	7.54	426	3.8 (1.9-7.4)	25.0 (24.0-26.8)
100	83.33%	7.97	375	5.7 (4.5-7.5)	24.5 (23.0-26.0)

**SURFACE WATER SAMPLE ARRIVAL INFORMATION**

**Collection Date/Time:** 6/12/95 @ 0915

**Method of Shipment:** Overnight Courier

**Temperature (°C):** 3.0

**TEST SUMMARY: SC-EE03-TX-201**

***Hyalella azteca* Chronic Sediment  
(Second Ecological Sampling Event)**

---

Test protocol:	WCC SOP E7
Test organism:	<i>Hyalella azteca</i>
Source:	WCC
Age of test organism:	second instar
Test initiation:	8/16/95
Test termination:	9/13/95
Temperature:	25 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	500 mL glass beaker
Sediment Test volume:	100 cm <sup>3</sup>
Organisms/replicate:	10
Replicates/concentration:	3
Feeding regime:	YTC/leaf slurry/algae
Aeration during test:	none
Dilution sediment:	Gravel
Dilution Water:	Spring Water
Test duration:	28 days
Effect measured:	Survival, growth, and reproduction
Reference Toxicant Data:	
NOEC (g/L KCl):	0.67

---

**TEST RESULTS : SC- EE03-TX-201**  
***Hyalella azteca* Chronic Survival and Growth Test**  
**(Second Ecological Sampling Event)**

**LC50** >100%

**Survival NOEC:** 100%

Statistical analysis method: Wilcoxon Rank Sum  
 Normality test: Fail  
 Homogeneity of variance test: Pass

**Growth NOEC:** 100%

Statistical analysis method: Bonferroni T-Test  
 Normality test: Pass  
 Homogeneity of variance test: Pass

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Gravel	82	7.40-8.21	343	5.5	23.2
Control			(257-429)	(3.2-7.7)	(21.7-24.7)
6.25	90	7.56-8.17	353	5.0	22.9
			(241-464)	(3.0-7.0)	(21.0-24.8)
12.5	90	7.54-8.16	358	5.3	22.8
			(237-478)	(3.5-7.0)	(20.6-24.9)
25	90	7.54-8.10	344	5.4	23.0
			(240-447)	(3.8-6.9)	(21.1-24.8)
50	93.3	7.54-8.13	336	5.0	22.7
			(241-431)	(3.0-7.0)	(21.0-24.4)
100	80	7.53-8.10	308	5.1	22.8
			(238-378)	(2.9-7.2)	(21.0-24.5)

**TEST SUMMARY: SC-EE04-TX-201**  
***Lumbriculus variegatus* Static Acute**  
**(Second Ecological Sampling Event)**

---

Test protocol: WCC SOP E9  
Test organism: *Lumbriculus variegatus*  
Source: WCC Culture Laboratory  
Age of test organism: Adult  
Test initiation: 6/21/95  
Test termination: 6/25/95  
Temperature: 20 +/- 1 °C  
Light: 50 - 100 foot candles  
Photoperiod: 16 hours light/8 hours dark  
Test vessel: 300 mL glass beaker  
Sediment Test volume: 100 cm<sup>3</sup>  
Organisms/replicate: 10  
Replicates/concentration: 4  
Feeding regime: none  
Aeration during test: none  
Dilution Sediment: Gravel mix  
Overlying water: Spring water  
Test duration: 96 hours  
Effect measured: Mortality  
Reference Toxicant Data:  
LC<sub>50</sub> (g/L NaCl): 0.77

---

**TEST RESULTS: SC-EE04-TX-201**  
***Lumbriculus variegatus* 96-Hour Static Acute**  
(Second Ecological Sampling Event)

$LC_{50} > 100\%$

Statistical analysis method: N/A

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Control	100.00%	7.45	545	5.0 (3.0-7.5)	23.1 (22.8-23.8)
6.25	100.00%	7.13	394	4.4 (1.5-6.8)	22.1 (21.6-22.5)
12.5	100.00%	7.21	389	4.2 (1.2-6.4)	22.5 (21.0-23.0)
25	100.00%	7.06	422	4.3 (1.2-6.8)	22.1 (21.2-23.0)
50	100.00%	6.93	418	3.3 (1.0-6.2)	22.1 (21.0-22.8)
100	100.00%	7.60	381	5.2 (3.6-6.3)	22.6 (21.4-23.0)

**SEDIMENT SAMPLE ARRIVAL INFORMATION**

**Collection Date/Time:** 6/12/95 @ 0730

**Method of Shipment:** Overnight Courier

**Temperature (°C):** 3.0

**TEST SUMMARY: SC-EE04-TX-201**

***Hyallela azteca* 96 Hour Static Acute  
(Second Ecological Sampling Event)**

---

Test protocol: WCC SOP E7

Test organism: *Hyallela azteca*

Source: Woodward-Clyde Consultants

Age of test organism: Third instar

Test initiation: 6/21/95

Test termination: 6/25/95

Temperature: 25 +/- 1 °C

Light: 50 - 100 foot candles

Photoperiod: 16 hours light/8 hours dark

Test vessel: 500 mL glass beaker

Sediment Test volume: 100 cm<sup>3</sup>

Organisms/replicate: 10

Replicates/concentration: 3

Feeding regime: none

Aeration during test: none

Dilution sediment: Gravel

Overlying water: Spring water

Test duration: 96 hours

Effect measured: Mortality

Reference Toxicant Data:  
LC<sub>50</sub> (g/L NaCl): 0.67

---

**TEST RESULTS: SC-EE04-TX-201**  
***Hyallela azteca* 96-Hour Static Acute**  
(Second Ecological Sampling Event)  
 $LC_{50} > 100\%$   
Statistical analysis method: N/A

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Control	96.67%	7.30	349	5.4 (4.0-7.5)	24.0 (21.4-26.0)
6.25	76.67%	7.23	382	3.1 (1.6-6.5)	24.6 (22.8-26.0)
12.5	70.00%	7.26	369	4.2 (1.7-6.6)	24.5 (23.2-26.2)
25	70.00%	7.26	373	3.7 (1.1-6.6)	24.3 (22.2-26.0)
50	80.00%	7.14	405	3.4 (1.0-5.9)	24.1 (21.0-26.2)
100	53.33%	7.61	361	5.5 (4.9-6.0)	24.2 (22.0-26.2)

**SURFACE WATER SAMPLE ARRIVAL INFORMATION**

**Collection Date/Time:** 6/12/95 @ 0730

**Method of Shipment:** Overnight Courier

**Temperature (°C):** 3.0

**TEST SUMMARY: SC-EE04-TX-201**

***Hyalella azteca* Chronic Sediment  
(Second Ecological Sampling Event)**

---

Test protocol:	WCC SOP E7
Test organism:	<i>Hyalella azteca</i>
Source:	WCC
Age of test organism:	second instar
Test initiation:	8/23/95
Test termination:	9/20/95
Temperature:	25 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	500 mL glass beaker
Sediment Test volume:	100 cm <sup>3</sup>
Organisms/replicate:	10
Replicates/concentration:	3
Feeding regime:	YTC/leaf slurry/algae
Aeration during test:	none
Dilution Water:	Gravel mix
Overlying water:	Spring water
Test duration:	28 days
Effect measured:	Survival, growth, and reproduction
Reference Toxicant Data: NOEC (g/L KCl):	0.67

---

**TEST RESULTS : SC- EE04-TX-201**  
***Hyalella azteca* Chronic Survival and Growth Test**  
(Second Ecological Sampling Event)

**LC50**                                    87.6% Spearman-Karber

**Survival NOEC:**

Statistical analysis method:	50%
Normality test:	Bonferroni T-Test
Homogeneity of variance test:	Pass

**Growth NOEC:**

Statistical analysis method:	100%
Normality test:	Bonferroni T-Test
Homogeneity of variance test:	Pass

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Gravel	100	7.70-8.27	298	5.4	22.7
Control			(197-398)	(3.5-7.3)	(21.2-24.2)
6.25	83.3	6.75-8.14	311	5.9	22.9
			(220-402)	(4.1-7.7)	(21.4-24.4)
12.5	96.7	6.85-8.11	272	5.8	22.7
			(155-388)	(3.7-7.8)	(21.2-24.2)
25	93.3	7.38-8.11	320	5.6	23.2
			(250-390)	(3.2-7.9)	(21.0-25.4)
50	96.7	7.73-8.13	348	5.3	22.9
			(246-449)	(3.0-7.5)	(21.6-24.2)
100	40	7.74-8.12	309	4.9	23.0
			(232-385)	(3.1-6.7)	(21.2-24.8)

**TEST SUMMARY: SC-EE05-TX-201**  
***Lumbriculus variegatus* Static Acute**  
**(Second Ecological Sampling Event)**

---

Test protocol: WCC SOP E9  
Test organism: *Lumbriculus variegatus*  
Source: WCC Culture Laboratory  
Age of test organism: Adult  
Test initiation: 6/21/95  
Test termination: 6/25/95  
Temperature: 20 +/- 1 °C  
Light: 50 - 100 foot candles  
Photoperiod: 16 hours light/8 hours dark  
Test vessel: 300 mL glass  
Sediment Test volume: 100 cm<sup>3</sup>  
Organisms/replicate: 10  
Replicates/concentration: 4  
Feeding regime: none  
Aeration during test: none  
Dilution Sediment: Gravel mix  
Overlying water: Spring Water  
Test duration: 96 hours  
Effect measured: Mortality  
Reference Toxicant Data:  
LC<sub>50</sub> (g/L NaCl): 0.77

---

**TEST RESULTS: SC-EE05-TX-201**  
***Lumbriculus variegatus* 96-Hour Static Acute**  
**(Second Ecological Sampling Event)**

LC<sub>50</sub> >100%

Statistical analysis method: N/A

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Control	100.00%	7.45	545	5.0 (3.0-7.5)	23.1 (22.8-23.8)
6.25	100.00%	7.47	415	4.9 (2.5-7.4)	21.8 (21.2-22.2)
12.5	100.00%	7.34	458	4.6 (1.8-7.1)	22.2 (21.4-23.0)
25	97.50%	7.38	410	5.0 (1.9-7.2)	21.3 (21.0-21.6)
50	97.50%	7.34	425	4.7 (1.8-7.0)	21.5 (21.0-22.0)
100	100.00%	7.81	345	5.6 (4.5-6.3)	21.8 (21.0-23.0)

**SEDIMENT SAMPLE ARRIVAL INFORMATION**

**Collection Date/Time:** 6/8/95 @ 1630

**Method of Shipment:** Overnight Courier

**Temperature (°C):** 3.0

**TEST SUMMARY: SC-EE05-TX-201**

***Hyallela azteca* 96 Hour Static Acute  
(Second Ecological Sampling Event)**

---

Test protocol: WCC SOP E7

Test organism: *Hyallela azteca*

Source: Woodward-Clyde Consultants

Age of test organism: Third instar

Test initiation: 6/21/95

Test termination: 6/25/95

Temperature: 25 +/- 1 °C

Light: 50 - 100 foot candles

Photoperiod: 16 hours light/8 hours dark

Test vessel: 500 mL glass beaker

Sediment Test volume: 100 cm<sup>3</sup>

Organisms/replicate: 10

Replicates/concentration: 3

Feeding regime: none

Aeration during test: none

Dilution sediment: Gravel

Overlying: Spring water

Test duration: 96 hours

Effect measured: Mortality

Reference Toxicant Data:  
LC<sub>50</sub> (g/L NaCl): 0.67

---

**TEST RESULTS: SC-EE05-TX-201**  
***Hyallela azteca* 96-Hour Static Acute**  
**(Second Ecological Sampling Event)**

LC<sub>50</sub> > 100%

Statistical analysis method: N/A

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Control	100.00%	7.30	349	5.4 (4.0-7.5)	24.0 (21.4-26.0)
6.25	100.00%	7.52	422	5.0 (1.4-7.2)	23.3 (22.0-26.0)
12.5	96.67%	7.43	431	4.4 (1.7-7.1)	24.9 (23.0-26.0)
25	90.00%	7.35	425	4.7 (1.8-7.2)	24.7 (22.2-26.0)
50	96.67%	7.27	442	3.8 (1.0-7.0)	24.8 (21.0-26.0)
100	76.67%	7.62	417	5.5 (4.7-6.5)	24.8 (22.0-26.2)

**SURFACE WATER SAMPLE ARRIVAL INFORMATION**

**Collection Date/Time:** 6/8/95 @ 1630

**Method of Shipment:** Overnight Courier

**Temperature (°C):** 3.0

**TEST SUMMARY: SC-EE05-TX-201**

***Hyalella azteca* Chronic Sediment  
(Second Ecological Sampling Event)**

---

Test protocol:	WCC SOP E7
Test organism:	<i>Hyalella azteca</i>
Source:	WCC
Age of test organism:	second instar
Test initiation:	8/23/95
Test termination:	9/20/95
Temperature:	25 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	500 mL glass beaker
Sediment Test volume:	100 cm <sup>3</sup>
Organisms/replicate:	10
Replicates/concentration:	3
Feeding regime:	YTC/leaf slurry/algae
Aeration during test:	none
Dilution sediment:	Gravel
Water:	Spring Water
Test duration:	28 days
Effect measured:	Survival, growth, and reproduction
Reference Toxicant Data:	
NOEC (g/L KCl):	0.67

---

**TEST RESULTS : SC- EE05-TX-201**  
***Hyalella azteca* Chronic Survival and Growth Test**  
**(Second Ecological Sampling Event)**

**LC50**                                    18.9% Spearman-Karber

<b>Survival NOEC:</b>	6.25%
Statistical analysis method:	Bonferroni T-Test
Normality test:	Pass
Homogeneity of variance test:	Pass
<b>Growth NOEC:</b>	100%
Statistical analysis method:	Bonferroni T-Test
Normality test:	Pass
Homogeneity of variance test:	Pass

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Gravel	100	7.70-8.27	298	5.4	22.7
Control			(197-398)	(3.5-7.3)	(21.2-24.2)
6.25	93.3	7.71-8.16	376	5.6	23.3
			(263-488)	(4.0-7.2)	(21.6-25.0)
12.5	56.7	7.71-8.39	380	5.3	23.1
			(289-470)	(3.3-7.3)	(21.8-24.4)
25	43.3	7.80-8.31	358	5.7	23.3
			(274-442)	(4.1-7.3)	(21.8-24.8)
50	36.7	7.82-8.19	347	5.7	23.3
			(261-433)	(4.0-7.4)	(21.5-25.0)
100	40	7.75-8.16	310	5.0	22.9
			(236-384)	(3.0-6.9)	(21.2-24.6)

**TEST SUMMARY: SC-EE06-TX-201**  
***Lumbriculus variegatus* Static Acute**  
**(Second Ecological Sampling Event)**

---

Test protocol:	WCC SOP E9
Test organism:	<i>Lumbriculus variegatus</i>
Source:	WCC Culture Laboratory
Age of test organism:	Adult
Test initiation:	6/19/95
Test termination:	6/23/95
Temperature:	20 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	300 mL glass beaker
Sediment Test volume:	100 cm <sup>3</sup>
Organisms/replicate:	10
Replicates/concentration:	4
Feeding regime:	none
Aeration during test:	none
Dilution Sediment:	Gravel mix
Overlying Water:	Spring Water
Test duration:	96 hours
Effect measured:	Mortality
Reference Toxicant Data:	0.77
LC <sub>50</sub> (g/L KCl):	

---

**TEST RESULTS: SC-EE06-TX-201**  
***Lumbriculus variegatus* 96-Hour Static Acute**  
 (Second Ecological Sampling Event)  
 $LC_{50} > 100\%$

Statistical analysis method: N/A

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Control	100.00%	7.72	336	6.4 (4.6-8.2)	21.8 (19.8-25.0)
6.25	97.50%	7.67	332	5.5 (2.8-8.1)	21.9 (20.2-25.2)
12.5	100.00%	7.46	341	5.9 (4.2-8.1)	22.1 (20.6-25.6)
25	72.50%	7.34	349	5.3 (1.6-8.0)	21.8 (19.8-25.2)
50	92.50%	7.29	352	3.7 (0.5-7.8)	22.1 (19.0-26.5)
100	100.00%	7.81	330	6.1 (4.1-7.7)	22.4 (20.6-27.0)

**SEDIMENT SAMPLE ARRIVAL INFORMATION**

<b>Collection Date/Time:</b>	6/8/95 @ 1245
<b>Method of Shipment:</b>	Overnight Courier
<b>Temperature (°C):</b>	3.0

**TEST SUMMARY: SC-EE06-TX-201**  
***Hyallela azteca* 96 Hour Static Acute**  
**(Second Ecological Sampling Event)**

---

Test protocol:	WCC SOP E7
Test organism:	<i>Hyallela azteca</i>
Source:	Woodward-Clyde Consultants
Age of test organism:	Third instar
Test initiation:	6/19/95
Test termination:	6/23/95
Temperature:	25 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	500 mL glass beaker
Sediment Test volume:	100 cm <sup>3</sup>
Organisms/replicate:	10
Replicates/concentration:	3
Feeding regime:	none
Aeration during test:	none
Dilution sediment:	Gravel
Overlying	Spring water
Test duration:	96 hours
Effect measured:	Mortality
Reference Toxicant Data:	0.67
LC <sub>50</sub> (g/L KCl):	

---

**TEST RESULTS: SC-EE06-TX-201**  
***Hyallela azteca* 96-Hour Static Acute**  
 (Second Ecological Sampling Event)

LC<sub>50</sub> > 100%

Statistical analysis method: N/A

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Control	93.33%	7.54	382	5.9 (4.5-8.2)	16.8 (23.0-25.4)
6.25	50.00%	7.03	398	4.5 (0.3-8.2)	25.3 (24.8-25.8)
12.5	60.00%	7.02	413	4.7 (0.3-8.2)	25.3 (25.0-25.5)
25	60.00%	7.00	423	4.8 (0.3-8.3)	24.4 (23.0-25.2)
50	76.67%	7.00	431	4.0 (0.4-8.3)	24.3 (23.0-25.0)
100	63.33%	7.58	384	5.7 (4.2-8.3)	24.4 (24.0-25.2)

**SURFACE WATER SAMPLE ARRIVAL INFORMATION**

**Collection Date/Time:** 6/8/95 @ 1245

**Method of Shipment:** Overnight Courier

**Temperature (°C):** 3.0

**TEST SUMMARY: SC-EE06-TX-201**  
***Hyalella azteca Chronic Sediment***  
***(Second Ecological Sampling Event)***

---

Test protocol:	WCC SOP E7
Test organism:	<i>Hyalella azteca</i>
Source:	WCC
Age of test organism:	second instar
Test initiation:	8/21/95
Test termination:	9/18/95
Temperature:	25 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	500 mL glass beaker
Sediment Test volume:	100 cm <sup>3</sup>
Organisms/replicate:	10
Replicates/concentration:	3
Feeding regime:	YTC/leaf slurry/algae
Aeration during test:	none
Dilution sediment:	Gravel
Water:	Spring Water
Test duration:	28 days
Effect measured:	Survival, growth, and reproduction
Reference Toxicant Data:	
NOEC (g/L KCl):	0.67

---

**TEST RESULTS : SC- EE06-TX-201**  
***Hyalella azteca* Chronic Survival and Growth Test**  
(Second Ecological Sampling Event)

**LC50** 50.45% Spearman-Karber

**Survival NOEC:**

Statistical analysis method:	25%
Normality test:	Bonferroni T-Test
Homogeneity of variance test:	Pass

**Growth NOEC:**

Statistical analysis method:	100%
Normality test:	Bonferroni T-Test
Homogeneity of variance test:	Pass

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Gravel	84	7.49-8.05	392	5.9	22.7
Control			(254-529)	(3.5-8.3)	(20.8-24.6)
6.25	66.7	7.37-8.10	325	5.2	23.1
			(245-405)	(2.5-7.8)	(21.2-25.0)
12.5	80	7.38-8.15	396	5.2	23.2
			(350-441)	(2.5-7.9)	(21.2-25.2)
25	70	7.46-8.14	339	5.3	23.0
			(259-419)	(2.7-7.9)	(20.8-25.1)
50	56.7	7.31-8.17	324	5.3	22.8
			(216-432)	(2.7-7.8)	(20.5-25.0)
100	20	7.28-8.13	369	5.5	22.5
			(230-507)	(3.0-8.0)	(20.0-24.9)

**TEST SUMMARY: SC-EE07-TX-201**

***Lumbriculus variegatus* Static Acute  
(Second Ecological Sampling Event)**

---

Test protocol: WCC SOP E9

Test organism: *Lumbriculus variegatus*

Source: WCC Culture Laboratory

Age of test organism: Adult

Test initiation: 6/19/95

Test termination: 6/23/95

Temperature: 20 +/- 1 °C

Light: 50 - 100 foot candles

Photoperiod: 16 hours light/8 hours dark

Test vessel: 300 mL glass beaker

Sediment Test volume: 100 cm<sup>3</sup>

Organisms/replicate: 10

Replicates/concentration: 4

Feeding regime: none

Aeration during test: none

Dilution Sediment: Gravel mix

Overlying water Spring water

Test duration: 96 hours

Effect measured: Mortality

Reference Toxicant Data:  
LC<sub>50</sub> (g/L NaCl): 0.77

---

**TEST RESULTS: SC-EE07-TX-201**  
***Lumbriculus variegatus* 96-Hour Static Acute**  
**(Second Ecological Sampling Event)**

LC<sub>50</sub> >100%

Statistical analysis method: N/A

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Control	100.00%	7.72	336	6.2 (4.6-8.2)	21.8 (19.8-25.0)
6.25	80.00%	7.77	334	5.9 (2.8-8.1)	21.8 (19.8-25.5)
12.5	90.00%	7.72	334	5.8 (4.6-7.9)	22.2 (20.6-26.0)
25	90.00%	7.46	360	5.4 (3.8-7.6)	22.1 (19.8-26.0)
50	77.50%	7.38	360	5.6 (4.2-7.5)	21.9 (20.0-25.5)
100	92.50%	7.70	345	5.9 (4.4-7.6)	22.1 (20.2-25.5)

**SEDIMENT SAMPLE ARRIVAL INFORMATION**

**Collection Date/Time:** 6/8/95 @ 1000

**Method of Shipment:** Overnight Courier

**Temperature (°C):** 2.0

**TEST SUMMARY: SC-EE07-TX-201**

***Hyallela azteca* 96 Hour Static Acute  
(Second Ecological Sampling Event)**

---

Test protocol: WCC SOP E7

Test organism: *Hyallela azteca*

Source: Woodward-Clyde Consultants

Age of test organism: Third instar

Test initiation: 6/19/95

Test termination: 6/23/95

Temperature: 25 +/- 1 °C

Light: 50 - 100 foot candles

Photoperiod: 16 hours light/8 hours dark

Test vessel: 500 mL glass beaker

Sediment Test volume: 100 cm<sup>3</sup>

Organisms/replicate: 10

Replicates/concentration: 3

Feeding regime: none

Aeration during test: none

Dilution sediment: Gravel

Overlying: Spring water

Test duration: 96 hours

Effect measured: Mortality

Reference Toxicant Data:  
LC<sub>50</sub> (g/L NaCl): 0.67

---

**TEST RESULTS: SC-EE07-TX-201**  
***Hyallela azteca* 96-Hour Static Acute**  
**(Second Ecological Sampling Event)**

LC<sub>50</sub> : 71.9%

Statistical analysis method: Probit Analysis

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Control	93.33%	7.72	336	6.2 (4.6-8.2)	21.8 (19.8-25.0)
6.25	87.50%	7.43	376	5.0 (2.2-8.0)	24.8 (24.0-25.2)
12.5	73.33%	7.38	368	4.5 (0.6-8.1)	24.1 (23.0-24.8)
25	70.00%	7.23	383	3.4 (0.3-8.0)	25.4 (24.6-26.0)
50	56.67%	7.12	425	3.3 (0.4-7.7)	24.4 (23-25.2)
100	40.00%	7.96	378	5.5 (4.2-7.8)	24.0 (22.5-26.0)

**SURFACE WATER SAMPLE ARRIVAL INFORMATION**

**Collection Date/Time:** 6/8/95 @ 1000

**Method of Shipment:** Overnight Courier

**Temperature (°C):** 2.0

**TEST SUMMARY: SC-EE07-TX-201**

***Hyalella azteca* Chronic Sediment  
(Second Ecological Sampling Event)**

---

Test protocol:	WCC SOP E7
Test organism:	<i>Hyalella azteca</i>
Source:	WCC
Age of test organism:	second instar
Test initiation:	8/21/95
Test termination:	9/18/95
Temperature:	25 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	500 mL glass beaker
Sediment Test volume:	100 cm <sup>3</sup>
Organisms/replicate:	10
Replicates/concentration:	3
Feeding regime:	YTC/leaf slurry/algae
Aeration during test:	none
Dilution sediment:	Gravel
Water:	Spring Water
Test duration:	28 days
Effect measured:	Survival, growth, and reproduction
Reference Toxicant Data:	
NOEC (g/L KCl):	0.67

---

**TEST RESULTS : SC- EE07-TX-201**  
***Hyalella azteca* Chronic Survival and Growth Test**  
(Second Ecological Sampling Event)

**LC50**   28.7% Spearman-Karber

**Survival NOEC:**

Statistical analysis method:	<6.25%
Normality test:	Bonferroni T-Test
Homogeneity of variance test:	Pass

**Growth NOEC:**

Statistical analysis method:	50%
Normality test:	Bonferroni T-Test
Homogeneity of variance test:	Pass

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Silt	76.7	7.23-8.10	390	5.7	22.9
Control			(249-531)	(3.4-8.0)	(21.0-24.8)
6.25	63.3	7.33-8.16	320	5.5	23.0
			(241-398)	(3.1-7.9)	(20.9-25.0)
12.5	53.3	7.46-8.16	355	5.5	23.0
			(245-464)	(3.0-7.9)	(21.0-25.0)
25	56.7	7.41-8.18	330	5.5	23.0
			(220-440)	(3.0-8.0)	(21.2-24.8)
50	50	7.38-8.21	347	5.6	22.8
			(235-458)	(3.2-8.0)	(20.8-24.8)
100	3.3	7.34-8.21	361	5.7	22.8
			(234-487)	(3.4-8.0)	(20.6-24.9)

**TEST SUMMARY: SC-EE08-TX-201**

***Lumbriculus variegatus* Static Acute  
(Second Ecological Sampling Event)**

---

Test protocol: WCC SOP E9

Test organism: *Lumbriculus variegatus*

Source: WCC Culture Laboratory

Age of test organism: Adult

Test initiation: 6/19/95

Test termination: 6/23/95

Temperature: 20 +/- 1 °C

Light: 50 - 100 foot candles

Photoperiod: 16 hours light/8 hours dark

Test vessel: 300 mL glass beaker

Sediment Test volume: 100 cm<sup>3</sup>

Organisms/replicate: 10

Replicates/concentration: 4

Feeding regime: none

Aeration during test: none

Dilution Sediment: Gravel mix

Overlying water: Spring water

Test duration: 96 hours

Effect measured: Mortality

Reference Toxicant Data:  
LC<sub>50</sub> (g/L NaCl): 0.77

---

**TEST RESULTS: SC-EE08-TX-201**  
***Lumbriculus variegatus* 96-Hour Static Acute**  
(Second Ecological Sampling Event)  
**LC<sub>50</sub> >100%**

Statistical analysis method: N/A

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Control	100.00%	7.72	336	6.2 (4.6-8.2)	21.8 (19.8-25.0)
6.25	92.50%	7.72	336	5.7 (3.5-8.1)	22.6 (20.0-27.5)
12.5	100.00%	7.76	329	5.6 (4.0-7.8)	22.7 (20.8-27.5)
25	100.00%	7.51	335	4.9 (3.1-7.7)	22.0 (20.0-26.9)
50	52.50%	7.54	338	5.4 (4.0-7.6)	20.6 (19.8-21.0)
100	77.50%	7.76	332	5.4 (3.8-7.6)	20.7 (20.2-21.0)

**SEDIMENT SAMPLE ARRIVAL INFORMATION**

**Collection Date/Time:** 6/8/95 @ 0830  
**Method of Shipment:** Overnight Courier  
**Temperature (°C):** 2.0

**TEST SUMMARY: SC-EE08-TX-201**  
***Hyallela azteca* 96 Hour Static Acute**  
**(Second Ecological Sampling Event)**

---

Test protocol:	WCC SOP E7
Test organism:	<i>Hyallela azteca</i>
Source:	Woodward-Clyde Consultants
Age of test organism:	Third instar
Test initiation:	6/19/95
Test termination:	6/23/95
Temperature:	25 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	500 mL glass beaker
Sediment Test volume:	100 cm <sup>3</sup>
Organisms/replicate:	10
Replicates/concentration:	3
Feeding regime:	none
Aeration during test:	none
Dilution sediment:	Gravel
Overlying:	Spring water
Test duration:	96 hours
Effect measured:	Mortality
Reference Toxicant Data: LC <sub>50</sub> (g/L NaCl):	0.67

---

**TEST RESULTS: SC-EE08-TX-201**  
***Hyallela azteca* 96-Hour Static Acute**  
**(Second Ecological Sampling Event)**

LC<sub>50</sub> > 100%

Statistical analysis method: N/A

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Control	93.33%	7.72	336	6.2 (4.6-8.2)	21.8 (19.8-25.0)
6.25	83.33%	7.62	349	5.0 (305-7.9)	24.9 (24.8-25.0)
12.5	66.67%	7.40	349	4.7 (0.6-8.1)	24.3 (22.5-26.0)
25	53.33%	7.21	360	4.7 (0.4-8.0)	24.2 (22.5-25.2)
50	73.33%	7.12	374	3.7 (0.5-8.1)	25.6 (25.0-26.0)
100	66.67%	7.78	377	3.8 (0.5-8.0)	25.7 (25.0-26.0)

**SURFACE WATER SAMPLE ARRIVAL INFORMATION**

**Collection Date/Time:** 6/8/95 @ 0830

**Method of Shipment:** Overnight Courier

**Temperature (°C):** 2.0

**TEST SUMMARY: SC-EE08-TX-201**

***Hyalella azteca* Chronic Sediment  
(Second Ecological Sampling Event)**

---

Test protocol:	WCC SOP E7
Test organism:	<i>Hyalella azteca</i>
Source:	WCC
Age of test organism:	second instar
Test initiation:	8/21/95
Test termination:	9/18/95
Temperature:	25 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	500 mL glass beaker
Sediment Test volume:	100 cm <sup>3</sup>
Organisms/replicate:	10
Replicates/concentration:	3
Feeding regime:	YTC/leaf slurry/algae
Aeration during test:	none
Dilution sediment:	Gravel
Dilution Water:	Spring Water
Test duration:	28 days
Effect measured:	Survival, growth, and reproduction
Reference Toxicant Data: NOEC (g/L KCl):	0.67

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**TEST RESULTS : SC- EE08-TX-201**  
***Hyalella azteca* Chronic Survival and Growth Test**  
(Second Ecological Sampling Event)

**LC50**   86.1% Spearman-Karber

**Survival NOEC:**

Statistical analysis method:	50%
Normality test:	Dunnett's
Homogeneity of variance test:	Pass

**Growth NOEC:**

Statistical analysis method:	100%
Normality test:	Bonferroni T-Test
Homogeneity of variance test:	Pass

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Silt	76.7	7.23-8.10	390	5.7	22.9
Control			(249-531)	(3.4-8.0)	(21.0-24.8)
6.25	70	7.41-8.11	310	5.6	22.9
			(231-389)	(3.4-7.8)	(20.8-25.0)
12.5	60	7.40-8.16	351	5.6	22.6
			(237-464)	(3.3-7.9)	(20.5-24.6)
25	86.7	7.46-8.18	342	5.5	22.8
			(244-440)	(3.1-7.9)	(20.8-24.8)
50	80	7.40-8.21	348	5.7	22.9
			(238-458)	(3.4-8.0)	(20.7-25.0)
100	43.3	7.40-8.21	369	5.6	22.8
			(250-487)	(3.2-8.0)	(21.0-24.5)

**TEST SUMMARY: SC-EE09-TX-201**  
***Lumbriculus variegatus* Static Acute**  
**(Second Ecological Sampling Event)**

---

Test protocol:	WCC SOP E9
Test organism:	<i>Lumbriculus variegatus</i>
Source:	WCC Culture Laboratory
Age of test organism:	Adult
Test initiation:	6/19/95
Test termination:	6/23/95
Temperature:	20 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	300 mL glass beaker
Sediment Test volume:	100 cm <sup>3</sup>
Organisms/replicate:	10
Replicates/concentration:	4
Feeding regime:	none
Aeration during test:	none
Dilution Sediment:	Gravel
Test duration:	96 hours
Effect measured:	Mortality
Reference Toxicant Data: LC <sub>50</sub> (g/L NaCl):	0.77

---

**TEST RESULTS: SC-EE09-TX-201**  
***Lumbriculus variegatus* 96-Hour Static Acute**  
(Second Ecological Sampling Event)

$LC_{50} > 100\%$

Statistical analysis method: N/A

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Control	100.00%	7.72	336	6.2 (4.6-8.2)	21.8 (19.8-25.0)
6.25	100.00%	7.77	356	5.7 (4.2-8.0)	21.2 (20.2-22.0)
12.5	92.50%	7.69	339	5.7 (4.1-8.0)	21.2 (20.2-22.0)
25	95.00%	7.54	341	5.5 (3.2-7.9)	22.3 (20.8-25.8)
50	97.50%	7.42	355	5.6 (2.9-7.8)	21.4 (19.8-23.0)
100	90.00%	8.01	334	6.2 (5.5-7.7)	21.6 (20.4-23.0)

**SEDIMENT SAMPLE ARRIVAL INFORMATION**

**Collection Date/Time:** 6/7/95 @ 1545

**Method of Shipment:** Overnight Courier

**Temperature (°C):** 0.8

**TEST SUMMARY: SC-EE09-TX-201**  
***Hyallela azteca* 96 Hour Static Acute**  
**(Second Ecological Sampling Event)**

---

Test protocol:	WCC SOP E7
Test organism:	<i>Hyallela azteca</i>
Source:	Woodward-Clyde Consultants
Age of test organism:	Third instar
Test initiation:	6/19/95
Test termination:	6/23/95
Temperature:	25 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	500 mL glass beaker
Sediment Test volume:	100 cm <sup>3</sup>
Organisms/replicate:	10
Replicates/concentration:	3
Feeding regime:	none
Aeration during test:	none
Dilution sediment:	Gravel
Overlying:	Spring water
Test duration:	96 hours
Effect measured:	Mortality
Reference Toxicant Data: LC <sub>50</sub> (g/L NaCl):	0.67

---

**TEST RESULTS: SC-EE09-TX-201**  
***Hyallela azteca* 96-Hour Static Acute**  
(Second Ecological Sampling Event)

LC<sub>50</sub> > 100%

Statistical analysis method: N/A

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Control	93.33%	7.72	336	6.2 (4.6-8.2)	21.8 (19.8-25.0)
6.25	90.00%	7.45	353	5.1 (3.0-8.3)	24.8 (23.0-25.8)
12.5	70.00%	7.43	350	4.6 (0.7-8.3)	24.4 (23.0-25.5)
25	83.33%	7.24	356	4.6 (0.8-8.3)	25.0 (24.0-25.8)
50	76.67%	7.85	352	4.6 (0.6-8.3)	24.7 (22.5-26.0)
100	56.67%	7.93	341	6.1 (5.3-8.3)	24.5 (22.2-26.0)

**SURFACE WATER SAMPLE ARRIVAL INFORMATION**

**Collection Date/Time:** 6/7/95 @ 1545

**Method of Shipment:** Overnight Courier

**Temperature (°C):** 0.8

**TEST SUMMARY: SC-EE09-TX-201**

*Hyalella azteca* Chronic Sediment  
**(Second Ecological Sampling Event)**

---

Test protocol:	WCC SOP E7
Test organism:	<i>Hyalella azteca</i>
Source:	WCC
Age of test organism:	second instar
Test initiation:	8/21/95
Test termination:	9/18/95
Temperature:	25 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	500 mL glass beaker
Sediment Test volume:	100 cm <sup>3</sup>
Organisms/replicate:	10
Replicates/concentration:	3
Feeding regime:	YTC/leaf slurry/algae
Aeration during test:	none
Dilution Water:	Spring Water
Test duration:	28 days
Effect measured:	Survival, growth, and reproduction
Reference Toxicant Data:	
NOEC (g/L KCl):	0.67

---

**TEST RESULTS : SC- EE09-TX-201**  
***Hyalella azteca* Chronic Survival and Growth Test**  
(Second Ecological Sampling Event)

**LC50** >100%

**Survival NOEC:** Not Calculable

Statistical analysis method:

Normality test: Pass

Homogeneity of variance test: Pass

**Growth NOEC:** 100%

Statistical analysis method: Bonferroni T-Test

Normality test: Pass

Homogeneity of variance test: Pass

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Silt	76.7	7.49-8.05	390	5.7	22.9
Control			(249-531)	(3.4-8.0)	(21.0-24.8)
6.25	60	7.44-8.22	387	5.8	22.4
			(247-526)	(3.7-7.9)	(20.6-24.2)
12.5	43.3	7.38-8.25	373	5.5	22.7
			(243-502)	(3.1-7.8)	(20.8-24.5)
25	73.3	7.41-8.27	354	5.5	22.7
			(233-475)	(3.2-7.7)	(20.6-24.7)
50	46.7	7.53-8.28	343	5.4	22.5
			(243-443)	(3.0-7.8)	(21.0-24.0)
100	66.7	7.48-8.39	334	5.5	22.3
			(245-423)	(3.1-7.8)	(20.2-24.4)

**TEST SUMMARY: SC-EE10-TX-201**  
***Lumbriculus variegatus* Static Acute**  
**(Second Ecological Sampling Event)**

---

Test protocol:	WCC SOP E9
Test organism:	<i>Lumbriculus variegatus</i>
Source:	WCC Culture Laboratory
Age of test organism:	Adult
Test initiation:	6/21/95
Test termination:	6/25/95
Temperature:	20 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	300 mL glass beaker
Sediment Test volume:	100 cm <sup>3</sup>
Organisms/replicate:	10
Replicates/concentration:	4
Feeding regime:	none
Aeration during test:	none
Dilution Sediment:	Gravel mix
Overlying water:	Spring water
Test duration:	96 hours
Effect measured:	Mortality
Reference Toxicant Data:	0.77
LC <sub>50</sub> (g/L NaCl):	

---

**TEST RESULTS: SC-EE10-TX-201**  
***Lumbriculus variegatus* 96-Hour Static Acute**  
(Second Ecological Sampling Event)

LC<sub>50</sub> >100%

Statistical analysis method: N/A

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Control	100.00%	7.27	349	4.5 (2.3-7.2)	22.4 (21.6-23.0)
6.25	100.00%	7.72	392	5.2 (3.6-7.2)	22.5 (22.3-23.0)
12.5	100.00%	7.63	400	5.0 (2.8-6.9)	22.4 (21.9-23.0)
25	100.00%	7.53	400	4.5 (1.9-6.5)	21.9 (21.0-23.0)
50	97.50%	7.63	357	5.5 (4.1-6.4)	23.0 (23.0-23.0)
100	100.00%	7.80	353	5.7 (5.5-6.0)	22.2 (21.6-23.0)

**SEDIMENT SAMPLE ARRIVAL INFORMATION**

**Collection Date/Time:** 6/7/95 @ 1415

**Method of Shipment:** Overnight Courier

**Temperature (°C):** 3.2

**TEST SUMMARY: SC-EE10-TX-201**  
***Hyallela azteca* 96 Hour Static Acute**  
**(Second Ecological Sampling Event)**

---

Test protocol:	WCC SOP E7
Test organism:	<i>Hyallela azteca</i>
Source:	Woodward-Clyde Consultants
Age of test organism:	Third instar
Test initiation:	6/21/95
Test termination:	6/25/95
Temperature:	25 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	500 mL glass beaker
Sediment Test volume:	100 cm <sup>3</sup>
Organisms/replicate:	10
Replicates/concentration:	3
Feeding regime:	none
Aeration during test:	none
Dilution sediment:	Gravel
Overlying:	Spring water
Test duration:	96 hours
Effect measured:	Mortality
Reference Toxicant Data: LC <sub>50</sub> (g/L NaCl):	0.67

---

**TEST RESULTS: SC-EE10-TX-201**  
***Hyallela azteca* 96-Hour Static Acute**  
 (Second Ecological Sampling Event)

LC<sub>50</sub> > 100%

Statistical analysis method: N/A

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Control	86.67%	7.27	349	4.5 (2.3-7.2)	22.4 (21.6-23.0)
6.25	93.33%	7.42	461	5.2 (3.3-7.3)	24.4 (22.2-26.2)
12.5	96.67%	7.34	457	4.7 (2.6-7.1)	25.2 (23.6-26.2)
25	90.00%	7.36	513	5.0 (3.6-7.0)	25.2 (22.3-26.5)
50	100.00%	7.47	415	5.0 (3.9-7.0)	24.9 (21.6-26.2)
100	83.33%	7.63	348	5.1 (3.4-6.5)	25.0 (23.0-26.2)

**SURFACE WATER SAMPLE ARRIVAL INFORMATION**

**Collection Date/Time:** 6/7/95 @ 1415

**Method of Shipment:** Overnight Courier

**Temperature (°C):** 3.2

**TEST SUMMARY: SC-EE10-TX-201**

***Hyalella azteca* Chronic Sediment  
(Second Ecological Sampling Event)**

---

Test protocol:	WCC SOP E7
Test organism:	<i>Hyalella azteca</i>
Source:	WCC
Age of test organism:	second instar
Test initiation:	8/23/95
Test termination:	9/20/95
Temperature:	25 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	500 mL glass beaker
Sediment Test volume:	100 cm <sup>3</sup>
Organisms/replicate:	10
Replicates/concentration:	3
Feeding regime:	YTC/leaf slurry/algae
Aeration during test:	none
Dilution sediment:	Gravel
Water:	Spring Water
Test duration:	28 days
Effect measured:	Survival, growth, and reproduction
Reference Toxicant Data:	
NOEC (g/L KCl):	0.67

---

**TEST RESULTS : SC- EE10-TX-201**  
***Hyalella azteca* Chronic Survival and Growth Test**  
**(Second Ecological Sampling Event)**

**LC50** >100%

<b>Survival NOEC:</b>	100%
Statistical analysis method:	Bonferroni T-Test
Normality test:	Pass
Homogeneity of variance test:	Pass
<b>Growth NOEC:</b>	100%
Statistical analysis method:	Bonferroni T-Test
Normality test:	Pass
Homogeneity of variance test:	Pass

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Silt	83.3	7.55-8.19	366	5.4	22.8
Control			(268-464)	(3.4-7.3)	(20.5-25.0)
6.25	80	7.70-8.14	417	5.2	22.9
			(253-580)	(3.2-7.1)	(21.0-24.8)
12.5	86.7	7.70-8.16	388	5.3	23.2
			(263-512)	(3.6-7.0)	(21.5-24.8)
25	80	7.71-8.15	390	5.2	22.9
			(247-532)	(3.3-7.1)	(21.2-24.6)
50	86.7	7.71-8.16	374	5.2	23.4
			(255-492)	(3.1-7.2)	(21.5-25.2)
100	86.7	7.74-8.13	349	5.1	22.9
			(243-455)	(3.4-6.7)	(21.2-24.6)

**TEST SUMMARY: SC-EW01-TX-201**

***Lumbriculus variegatus* Static Acute  
(Second Ecological Sampling Event)**

---

Test protocol: WCC SOP E9

Test organism: *Lumbriculus variegatus*

Source: WCC Culture Laboratory

Age of test organism: Adult

Test initiation: 6/26/95

Test termination: 6/30/95

Temperature: 20 +/- 1 °C

Light: 50 - 100 foot candles

Photoperiod: 16 hours light/8 hours dark

Test vessel: 300 mL glass beaker

Sediment Test volume: 100 cm<sup>3</sup>

Organisms/replicate: 10

Replicates/concentration: 4

Feeding regime: none

Aeration during test: none

Dilution Sediment: Silt mix

Test duration: 96 hours

Effect measured: Mortality

Reference Toxicant Data:  
LC<sub>50</sub> (g/L NaCl): 0.77

---

**TEST RESULTS: SC-EW01-TX-201**  
***Lumbriculus variegatus* 96-Hour Static Acute**  
**(Second Ecological Sampling Event)**

$LC_{50} > 100\%$

Statistical analysis method: N/A

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Control	100.00%	7.11	204	5.2 (2.5-6.7)	22.9 (21.2-23.8)
6.25	100.00%	7.31	350	4.4 (1.8-5.9)	22.5 (21.0-24.0)
12.5	92.50%	7.23	368	3.4 (1.4-5.7)	22.7 (21.8-24.0)
25	100.00%	7.66	356	3.0 (2.1-4.5)	22.8 (21.8-24.0)
50	100.00%	6.98	418	2.0 (0.9-4.0)	22.8 (21.2-24.0)
100	100.00%	6.95	399	2.5 (0.9-4.4)	22.8 (22.0-23.2)

**SEDIMENT SAMPLE ARRIVAL INFORMATION**

**Collection Date/Time:** 6/13/95 @ 1120

**Method of Shipment:** Overnight Courier

**Temperature (°C):** 1.0

**TEST SUMMARY: SC-EW01-TX-201**

***Hyallela azteca* 96 Hour Static Acute  
(Second Ecological Sampling Event)**

---

Test protocol: WCC SOP E7

Test organism: *Hyallela azteca*

Source: Woodward-Clyde Consultants

Age of test organism: Third instar

Test initiation: 6/26/95

Test termination: 6/30/95

Temperature: 25 +/- 1 °C

Light: 50 - 100 foot candles

Photoperiod: 16 hours light/8 hours dark

Test vessel: 500 mL glass beaker

Sediment Test volume: 100 cm<sup>3</sup>

Organisms/replicate: 10

Replicates/concentration: 3

Feeding regime: none

Aeration during test: none

Dilution sediment: Gravel mix

Overlying water: Spring water

Test duration: 96 hours

Effect measured: Mortality

Reference Toxicant Data:  
LC<sub>50</sub> (g/L NaCl): 0.67

---

**TEST RESULTS: SC-EW01-TX-201**  
***Hyallolela azteca* 96-Hour Static Acute**  
**(Second Ecological Sampling Event)**

LC<sub>50</sub> > 100%

Statistical analysis method: N/A

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Control	93.33%	7.35	336	4.9 (2.1-6.6)	23.3 (22.0-24.1)
6.25	96.67%	7.23	343	4.1 (0.8-5.7)	23.4 (22.0-24.2)
12.5	83.33%	7.13	348	3.3 (0.6-5.1)	23.5 (22.0-24.0)
25	60.00%	6.84	380	2.0 (0.5-4.3)	23.5 (22.0-24.1)
50	83.33%	6.71	403	1.8 (0.5-4.18)	23.5 (22.2-24.5)
100	83.33%	7.41	351	1.7 (0.5-2.7)	23.6 (23.0-24.2)

**SURFACE WATER SAMPLE ARRIVAL INFORMATION**

**Collection Date/Time:** 6/13/95 @ 1120

**Method of Shipment:** Overnight Courier

**Temperature (°C):** 1.0

**TEST SUMMARY: SC-EW01-TX-201**  
***Hyalella azteca* Chronic Sediment**  
**(Second Ecological Sampling Event)**

---

Test protocol:	WCC SOP E7
Test organism:	<i>Hyalella azteca</i>
Source:	WCC
Age of test organism:	second instar
Test initiation:	8/15/95
Test termination:	9/12/95
Temperature:	25 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	500 mL glass beaker
Sediment Test volume:	100 cm <sup>3</sup>
Organisms/replicate:	10
Replicates/concentration:	3
Feeding regime:	YTC/leaf slurry/algae
Aeration during test:	none
Dilution Sediment:	Gravel
Water:	Spring Water
Test duration:	28 days
Effect measured:	Survival, growth, and reproduction
Reference Toxicant Data:	
NOEC (g/L KCl):	0.67

---

**TEST RESULTS : SC- EW01-TX-201**  
***Hyalella azteca* Chronic Survival and Growth Test**  
**(Second Ecological Sampling Event)**

**LC50** >100%

**Survival NOEC:** 100%

Statistical analysis method: Dunnett's

Normality test: Pass

Homogeneity of variance test: Pass

**Growth NOEC:** 100%

Statistical analysis method: Bonferroni T-Test

Normality test: Pass

Homogeneity of variance test: Pass

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Silt	66.7	7.15-7.99	343	5.6	22.8
Control			(241-444)	(3.6-7.6)	(20.5-25.0)
6.25	80	7.40-8.10	328	5.9	22.8
			(235-421)	(4.2-7.6)	(20.5-25.0)
12.5	93.3	7.41-8.11	335	5.8	23.0
			(235-435)	(4.0-7.6)	(21.0-25.0)
25	83.3	7.46-8.00	336	5.8	23.2
			(236-436)	(3.9-7.6)	(21.1-25.2)
50	90	7.46-8.09	323	5.4	23.0
			(234-411)	(3.5-7.2)	(21.0-25.0)
100	56.7	7.46-8.16	320	5.0	22.8
			(232-408)	(3.5-6.5)	(20.6-25.0)

**TEST SUMMARY: SC-EW02-TX-201**

***Lumbriculus variegatus* Static Acute  
(Second Ecological Sampling Event)**

---

Test protocol: WCC SOP E9

Test organism: *Lumbriculus variegatus*

Source: WCC Culture Laboratory

Age of test organism: Adult

Test initiation: 6/26/95

Test termination: 6/30/95

Temperature: 20 +/- 1 °C

Light: 50 - 100 foot candles

Photoperiod: 16 hours light/8 hours dark

Test vessel: 300 mL glass beaker

Sediment Test volume: 100 cm<sup>3</sup>

Organisms/replicate: 10

Replicates/concentration: 4

Feeding regime: none

Aeration during test: none

Dilution Sediment: Silt mix

Overlying water: Spring water

Test duration: 96 hours

Effect measured: Mortality

Reference Toxicant Data:  
LC<sub>50</sub> (g/L NaCl): 0.77

---

**TEST RESULTS: SC-EW02-TX-201**  
***Lumbriculus variegatus* 96-Hour Static Acute**  
**(Second Ecological Sampling Event)**

LC<sub>50</sub> >100%

Statistical analysis method: N/A

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Control	100.00%	7.11	204	5.2 (2.5-6.7)	22.9 (21.2-23.8)
6.25	100.00%	7.34	343	4.3 (1.4-6.6)	22.8 (21.2-23.6)
12.5	100.00%	7.22	354	3.9 (0.8-6.6)	23.3 (22.0-24.0)
25	97.50%	7.35	356	4.2 (0.8-6.6)	22.8 (21.5-24.1)
50	100.00%	7.09	393	3.5 (0.8-6.2)	23.1 (22.0-24.0)
100	100.00%	7.90	341	5.4 (3.6-6.54)	22.5 (21.5-24.0)

**SEDIMENT SAMPLE ARRIVAL INFORMATION**

**Collection Date/Time:** 6/13/95 @ 0845

**Method of Shipment:** Overnight Courier

**Temperature (°C):** 1.0

**TEST SUMMARY: SC-EW02-TX-201**

***Hyallela azteca* 96 Hour Static Acute  
(Second Ecological Sampling Event)**

---

Test protocol:	WCC SOP E7
Test organism:	<i>Hyallela azteca</i>
Source:	Woodward-Clyde Consultants
Age of test organism:	Third instar
Test initiation:	6/26/95
Test termination:	6/30/95
Temperature:	25 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	500 mL glass beaker
Sediment Test volume:	100 cm <sup>3</sup>
Organisms/replicate:	10
Replicates/concentration:	3
Feeding regime:	none
Aeration during test:	none
Dilution sediment:	Gravel
Overlying:	Spring water
Test duration:	96 hours
Effect measured:	Mortality
Reference Toxicant Data: LC <sub>50</sub> (g/L NaCl):	0.67

---

**TEST RESULTS: SC-EW02-TX-201**  
***Hyallela azteca* 96-Hour Static Acute**  
(Second Ecological Sampling Event)

LC<sub>50</sub> > 100%

Statistical analysis method: N/A

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)
Control	93.33%	7.35	336	4.9 (2.1-6.6)
6.25	76.67%	7.19	342	4.2 (0.7-5.5)
12.5	73.33%	7.05	351	3.6 (0.6-5.4)
25	73.33%	6.94	374	3.1 (0.5-5.2)
50	80.00%	7.22	361	3.7 (0.6-6.7)
100	80.00%	7.73	340	5.4 (4.0-6.2)

**SURFACE WATER SAMPLE ARRIVAL INFORMATION**

**Collection Date/Time:** 6/13/95 @ 0845

**Method of Shipment:** Overnight Courier

**Temperature (°C):** 1.0

**TEST SUMMARY: SC-EW02-TX-201**  
***Hyalella azteca* Chronic Sediment**  
**(Second Ecological Sampling Event)**

---

Test protocol:	WCC SOP E7
Test organism:	<i>Hyalella azteca</i>
Source:	WCC
Age of test organism:	second instar
Test initiation:	8/15/95
Test termination:	9/12/95
Temperature:	25 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	500 mL glass beaker
Sediment Test volume:	100 cm <sup>3</sup>
Organisms/replicate:	10
Replicates/concentration:	3
Feeding regime:	YTC/leaf slurry/algae
Aeration during test:	none
Dilution sediment:	Gravel
Water:	Spring Water
Test duration:	28 days
Effect measured:	Survival, growth, and reproduction
Reference Toxicant Data:	
NOEC (g/L KCl):	0.67

---

**TEST RESULTS : SC- EW02-TX-201**  
***Hyalella azteca* Chronic Survival and Growth Test**  
(Second Ecological Sampling Event)

**LC50** >100%

**Survival NOEC:** 100%

Statistical analysis method: Dunnett's  
Normality test: Pass  
Homogeneity of variance test: Pass

**Growth NOEC:** 50%

Statistical analysis method: Bonferroni T-Test  
Normality test: Pass  
Homogeneity of variance test: Pass

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Silt	66.7	7.15-7.99	343	5.6	22.8
Control			(241-444)	(3.6-7.6)	(20.5-25.0)
6.25	53.3	7.48-8.05	342	5.4	23.0
			(236-448)	(3.6-7.1)	(21.0-25.0)
12.5	70	7.50-8.10	329	5.6	23.3
			(237-421)	(4.1-7.0)	(21.4-25.2)
25	76.7	7.52-8.09	331	5.4	22.8
			(236-425)	(3.8-6.9)	(20.8-24.8)
50	66.7	7.54-8.11	337	5.4	22.9
			(234-439)	(3.8-6.9)	(20.8-24.9)
100	80	7.55-8.09	309	5.4	22.9
			(232-385)	(3.6-7.1)	(21.0-24.8)

**TEST SUMMARY: SC-EW03-TX-201**

***Lumbriculus variegatus* Static Acute  
(Second Ecological Sampling Event)**

---

Test protocol: WCC SOP E9

Test organism: *Lumbriculus variegatus*

Source: WCC Culture Laboratory

Age of test organism: Adult

Test initiation: 6/23/95

Test termination: 6/27/95

Temperature: 20 +/- 1 °C

Light: 50 - 100 foot candles

Photoperiod: 16 hours light/8 hours dark

Test vessel: 300 mL glass beaker

Sediment Test volume: 100 cm<sup>3</sup>

Organisms/replicate: 10

Replicates/concentration: 4

Feeding regime: none

Aeration during test: none

Dilution Sediment: Silt mix

Overlying water Spring water

Test duration: 96 hours

Effect measured: Mortality

Reference Toxicant Data:  
LC<sub>50</sub> (g/L NaCl): 0.77

---

**TEST RESULTS: SC-EW03-TX-201**  
***Lumbriculus variegatus* 96-Hour Static Acute**  
(Second Ecological Sampling Event)

LC<sub>50</sub> >100%

Statistical analysis method: N/A

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Control	100.00%	7.42	414	5.2 (4.2-7.4)	23.1 (21.5-24)
6.25	100.00%	7.54	426	4.7 (2.7-7.4)	23.3 (22.5-23.5)
12.5	75.00%	7.57	431	4.2 (2.7-5.8)	23.4 (22.2-24.0)
25	87.50%	7.39	435	3.7 (1.2-7.0)	23.6 (22.5-24.0)
50	77.50%	7.38	434	3.5 (0.8-7.0)	23.3 (21.8-24.0)
100	97.50%	7.95	388	4.2 (2.2-6.6)	23.1 (21.5-24.0)

**SEDIMENT SAMPLE ARRIVAL INFORMATION**

**Collection Date/Time:** 6/13/95 @ 0750

**Method of Shipment:** Overnight Courier

**Temperature (°C):** 2.0

**TEST SUMMARY: SC-EW03-TX-201**

***Hyallela azteca* 96 Hour Static Acute  
(Second Ecological Sampling Event)**

---

Test protocol: WCC SOP E7

Test organism: *Hyallela azteca*

Source: Woodward-Clyde Consultants

Age of test organism: Third instar

Test initiation: 6/23/95

Test termination: 6/27/95

Temperature: 25 +/- 1 °C

Light: 50 - 100 foot candles

Photoperiod: 16 hours light/8 hours dark

Test vessel: 500 mL glass beaker

Sediment Test volume: 100 cm<sup>3</sup>

Organisms/replicate: 10

Replicates/concentration: 3

Feeding regime: none

Aeration during test: none

Dilution sediment: Gravel mix

Overlying: Spring water

Test duration: 96 hours

Effect measured: Mortality

Reference Toxicant Data:  
LC<sub>50</sub> (g/L NaCl): 0.67

---

**TEST RESULTS: SC-EW03-TX-201**  
***Hyallela azteca* 96-Hour Static Acute**  
(Second Ecological Sampling Event)  
LC<sub>50</sub> > 100%  
Statistical analysis method: N/A

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Control	93.33%	7.42	552	4.4 (3.0-7.3)	25.1 (24.2-26.0)
6.25	93.94%	7.11	457	3.7 (1.2-7.4)	24.4 (23.4-25.0)
12.5	100.00%	7.41	479	2.6 (0.8-7.5)	24.4 (24.0-25.0)
25	90.00%	7.39	433	3.4 (0.6-7.2)	24.6 (24.0-25.2)
50	83.33%	7.31	432	2.9 (0.7-6.8)	23.9 (23.2-25.0)
100	76.67%	7.84	381	4.6 (3.0-6.9)	23.8 (23.0-25.0)

**SURFACE WATER SAMPLE ARRIVAL INFORMATION**

**Collection Date/Time:** 6/13/95 @ 0750

**Method of Shipment:** Overnight Courier

**Temperature (°C):** 2.0

**TEST SUMMARY: SC-EW03-TX-201**

***Hyalella azteca* Chronic Sediment  
(Second Ecological Sampling Event)**

---

Test protocol:	WCC SOP E7
Test organism:	<i>Hyalella azteca</i>
Source:	WCC
Age of test organism:	second instar
Test initiation:	8/16/95
Test termination:	9/13/95
Temperature:	25 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	500 mL glass beaker
Sediment Test volume:	100 cm <sup>3</sup>
Organisms/replicate:	10
Replicates/concentration:	3
Feeding regime:	YTC/leaf slurry/algae
Aeration during test:	none
Dilution sediment:	Gravel
Water:	Spring Water
Test duration:	28 days
Effect measured:	Survival, growth, and reproduction
Reference Toxicant Data:	
NOEC (g/L KCl):	0.67

---

**TEST RESULTS : SC- EW03-TX-201**  
***Hyalella azteca* Chronic Survival and Growth Test**  
(Second Ecological Sampling Event)

**LC50** >100%

**Survival NOEC:**

Statistical analysis method:	Wilcoxon Rank Sum
Normality test:	Pass
Homogeneity of variance test:	Fail

**Growth NOEC:**

Statistical analysis method:	Bonferroni T-Test
Normality test:	Pass
Homogeneity of variance test:	Pass

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Gravel	82	7.40-8.21	343	5.5	23.2
Control			(257-429)	(3.2-7.7)	(21.7-24.7)
6.25	100	7.69-8.18	351	5.3	23.0
			(236-465)	(3.2-7.4)	(21.5-24.5)
12.5	86.7	7.60-8.14	332	5.4	23.1
			(232-432)	(3.6-7.2)	(21.2-25.0)
25	80	7.52-8.13	337	5.2	23.5
			(239-435)	(3.0-7.3)	(22.0-25.0)
50	60	7.53-8.18	329	5.7	23.5
			(237-421)	(4.0-7.3)	(21.9-25.0)
100	60	7.50-8.27	310	5.0	23.3
			(238-382)	(3.0-6.9)	(21.7-24.8)



**TEST SUMMARY: CR-EC01-TX-201**  
***Ceriodaphnia dubia* 48-Hour Static Acute**

---

Test protocol:	WCC SOP 401.2
Test organism:	<i>Ceriodaphnia dubia</i>
Source:	WCC Culture Laboratory
Age of test organism:	<24 hours
Test initiation:	6/14/95
Test termination:	6/16/95
Temperature:	25 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	30 mL styrene
Test volume:	20 mL
Organisms/replicate:	5
Replicates/concentration:	4
Feeding regime:	none
Aeration during test:	none
Dilution Water:	Hard Reconstituted Synthetic
Test duration:	48 hours
Effect measured:	Mortality

---

Reference Toxicant Data:  
LC<sub>50</sub> (g/L NaCl): 1.51

---

**TEST RESULTS: CR-EC01-TX-201**  
***Ceriodaphnia dubia* 48-Hour Static Acute**

LC<sub>50</sub> > 100%  
 Statistical analysis method: N/A

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )
Control	100	8.40-8.63	738 (731-744)	8.5 (8.3-8.6)	24.5 (24.0-25.0)	270	
6.25	100	8.53-8.54	770 (767-773)	8.4 (8.3-8.4)	24.5 (24.0-25.0)		
12.5	100	8.50-8.54	796 (776-816)	8.4 (8.3-8.4)	24.5 (24.0-25.0)		
25	100	8.43-8.58	794 (788-800)	8.4 (8.3-8.5)	24.5 (24.0-25.0)		
50	100	8.29-8.57	821 (748-893)	8.4 (8.3-8.5)	24.5 (24.0-25.0)		
100	100	8.17-8.57	1010 (972-1047)	8.4 (8.3-8.5)	24.5 (24.0-25.0)	324	350

**SURFACE WATER SAMPLE ARRIVAL INFORMATION**

<b>Collection Date/Time:</b>	6/13/95 @ 1245
<b>Use Date/Time:</b>	6/14/95 @ 1440
<b>Method of Shipment:</b>	Overnight Courier
<b>Temperature (°C):</b>	2
<b>pH:</b>	8.13
<b>Ammonia (mg/L):</b>	0.1
<b>Conductivity (umhos/cm):</b>	1047
<b>DO (mg/L):</b>	8.2

**TEST SUMMARY: CR-EC01-TX-201**  
***Ceriodaphnia dubia* Chronic Renewal**

---

Test protocol:	WCC SOP 501.1
Test organism:	<i>Ceriodaphnia dubia</i>
Source:	WCC Culture Laboratory
WCC Batch:	6/16/95
Age of test organism:	<24 hours
Test initiation:	6/16/95
Test termination:	6/23/95
Temperature:	25 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	30 mL styrene
Test volume:	15 mL
Organisms/replicate:	1
Replicates/concentration:	10
Feeding regime:	0.05 mL <i>Selenastrum</i> and 0.05 mL YTC daily
Aeration during test:	none
Dilution Water:	Hard Reconstituted Synthetic
Test duration:	7 days
Effect measured:	Survival and reproduction
Toxicity test methods and procedures were followed in accordance with EPA 600/4-89/001	
Reference Toxicant Data:	
NOEC (g/L NaCl):	0.75

---

**TEST RESULTS: CR-EC01-TX-201**  
***Ceriodaphnia dubia* Chronic Survival and Reproduction Test**

<b>Survival NOEC:</b>	100%
Statistical analysis method:	N/A
Normality test:	
Homogeneity of variance test:	
<b>Reproduction NOEC:</b>	100%
Statistical analysis method:	Dunnett's
Normality test:	Pass
Homogeneity of variance test:	Pass

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Control	100	8.30-8.71	861 (748-983)	7.9 (7.2-8.4)	24.6 (24.0-25.2)
6.25	100	8.01-8.66	880 (785-1031)	8.1 (7.1-8.6)	24.6 (24.0-25.2)
12.5	100	8.25-8.69	907 (806-1030)	8.1 (7.1-8.6)	24.6 (24.0-25.2)
25	100	8.30-8.69	927 (838-1058)	8.1 (7.0-8.5)	24.6 (24.0-25.2)
50	90	8.36-8.76	977 (890-1049)	8.1 (7.0-8.5)	24.6 (24.0-25.2)
100	100	8.26-8.64	1064 (998-1143)	8.2 (7.1-8.6)	24.6 (24.0-25.2)

	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )	Ammonia (mg/L)
Control	310		
EC01	324	350	0.1

**TEST SUMMARY: CR-EC01-TX-201**  
***Pimephales promelas* 48-Hour Static Acute**

---

Test protocol:	WCC SOP 410.2
Test organism:	<i>Pimephales promelas</i>
Source:	Woodward-Clyde Consultants
Age of test organism:	13 days
Test initiation:	6/14/95
Test termination:	6/16/95
Temperature:	20 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	500 mL plastic beaker
Test volume:	250 mL
Organisms/replicate:	10
Replicates/concentration:	2
Feeding regime:	none
Aeration during test:	none
Dilution Water:	Hard Reconstituted Synthetic
Test duration:	48 hours
Effect measured:	Mortality
Reference Toxicant Data:	
LC <sub>50</sub> (g/L NaCl):	5.26

---

**TEST RESULTS: CR-EC01-TX-201**  
***Pimephales promelas* 48-Hour Static Acute**

LC<sub>50</sub> > 100%

Statistical analysis method: N/A

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )
Control	100	8.29-8.31	340 (327-353)	8.0 (7.4-8.5)	20.9 (20.8-21.0)	158	146
6.25	100	8.24-8.37	408 (400-416)	7.7 (7.3-8.1)	20.9 (20.8-21.0)		
12.5	100	8.27-8.43	431 (419-442)	7.8 (7.3-8.2)	20.9 (20.8-21.0)		
25	100	8.24-8.49	521 (502-540)	7.8 (7.4-8.2)	20.9 (20.8-21.0)		
50	100	8.21-8.58	708 (685-730)	7.9 (7.5-8.2)	20.9 (20.8-21.0)		
100	100	8.13-8.61	1048 (1029-1066)	7.8 (7.3-8.2)	20.9 (20.8-21.0)	324	350

**SURFACE WATER SAMPLE ARRIVAL INFORMATION**

<b>Collection Date/Time:</b>	6/13/95 @ 1245
<b>Use Date/Time:</b>	6/14/95 @ 1510
<b>Method of Shipment:</b>	Overnight Courier
<b>Temperature (°C):</b>	2
<b>pH:</b>	8.13
<b>Ammonia (mg/L):</b>	0.1
<b>Conductivity (umhos/cm):</b>	1029
<b>DO (mg/L):</b>	8.2
<b>Description:</b>	Clear

**TEST SUMMARY: CR-EC01-TX-201**  
***Pimephales promelas* Chronic Renewal**

---

Test protocol:	WCC SOP 510.1
Test organism:	<i>Pimephales promelas</i>
Source:	Environmental Consulting & Testing
Age of test organism:	<24 hours
Test initiation:	6/16/95 @ 1600
Test termination:	6/23/95 @ 1610
Temperature:	25 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	500 mL plastic beaker
Test volume:	250 mL
Organisms/replicate:	10
Replicates/concentration:	4
Feeding regime:	0.1 mL brine shrimp nauplii twice daily
Aeration during test:	none
Dilution Water:	Hard Reconstituted Synthetic
Test duration:	7 days
Effect measured:	Survival and growth
Toxicity test methods and procedures were followed in accordance with EPA 600/4-89/001	
Reference Toxicant Data:	
NOEC (g/L NaCl):	3

---

**TEST RESULTS: CR-EC01-TX-201**  
***Pimephales promelas* Chronic Survival and Growth Test**

<b>Survival NOEC:</b>	100%
Statistical analysis method:	N/A
Normality test:	
Homogeneity of variance test:	
<b>Growth NOEC:</b>	100%
Statistical analysis method:	Dunnett's
Normality test:	Chi-Square - Pass
Homogeneity of variance test:	Bartlett's - Pass

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Control	100	7.86-8.50	343 (309-366)	7.8 (6.6-8.4)	24.7 (24.0-25.2)
6.25	100	7.91-8.51	384 (357-434)	7.7 (6.3-8.5)	24.7 (24.0-25.2)
12.5	97.5	7.94-8.51	422 (361-449)	7.7 (6.5-8.6)	24.7 (24.0-25.2)
25	100	7.97-8.53	510 (474-546)	7.7 (6.4-8.6)	24.7 (24.0-25.2)
50	100	8.04-8.56	681 (670-723)	7.8 (6.1-8.6)	24.7 (24.0-25.2)
100	100	8.20-8.62	1045 (957-1084)	7.8 (6.4-8.6)	24.7 (24.0-25.2)

	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )	Ammonia (mg/L)
Control	150		
EC01	324	350	0.1

**TEST SUMMARY: CR-EC02-TX-201**  
***Ceriodaphnia dubia* 48-Hour Static Acute**

---

Test protocol:	WCC SOP 401.2
Test organism:	<i>Ceriodaphnia dubia</i>
Source:	WCC Culture Laboratory
Age of test organism:	<24 hours
Test initiation:	6/13/95
Test termination:	6/15/95
Temperature:	25 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	30 mL styrene
Test volume:	20 mL
Organisms/replicate:	5
Replicates/concentration:	4
Feeding regime:	none
Aeration during test:	none
Dilution Water:	Hard Reconstituted Synthetic
Test duration:	48 hours
Effect measured:	Mortality
Reference Toxicant Data:	
LC <sub>50</sub> (g/L NaCl):	1.51

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**TEST RESULTS: CR-EC02-TX-201**  
***Ceriodaphnia dubia* 48-Hour Static Acute**

LC<sub>50</sub> > 100%

Statistical analysis method: N/A

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )
Control	100	8.40-8.63	738 (731-744)	8.5 (8.3-8.6)	24.5 (24.0-25.0)	270	
6.25	100	8.59-8.63	755 (748-762)	8.4 (8.3-8.5)	24.9 (24.8-25.0)		
12.5	100	8.58-8.63	767 (761-772)	8.4 (8.3-8.5)	24.9 (24.8-25.0)		
25	100	8.61-8.61	779 (763-794)	8.4 (8.2-8.5)	24.9 (24.8-25.0)		
50	100	8.54-8.69	795 (782-807)	8.8 (8.4-8.6)	24.9 (24.8-25.0)		
100	100	8.49-8.76	811 (795-827)	8.6 (8.5-8.6)	24.9 (24.8-25.0)	276	282

**SURFACE WATER SAMPLE ARRIVAL INFORMATION**

<b>Collection Date/Time:</b>	6/12/95 @ 1400
<b>Use Date/Time:</b>	6/13/95 @ 1545
<b>Method of Shipment:</b>	Overnight Courier
<b>Temperature (°C):</b>	2.5
<b>pH:</b>	8.49
<b>Ammonia (mg/L):</b>	0.17
<b>Conductivity (umhos/cm):</b>	827
<b>DO (mg/L):</b>	8.6

**TEST SUMMARY: CR-EC02-TX-201**  
***Ceriodaphnia dubia* Chronic Renewal**

---

Test protocol:	WCC SOP 501.1
Test organism:	<i>Ceriodaphnia dubia</i>
Source:	WCC Culture Laboratory
WCC Batch:	6/15/95
Age of test organism:	<24 hours
Test initiation:	6/15/95
Test termination:	6/22/95
Temperature:	25 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	30 mL styrene
Test volume:	15 mL
Organisms/replicate:	1
Replicates/concentration:	10
Feeding regime:	0.05 mL <i>Selenastrum</i> and 0.05 mL YTC daily
Aeration during test:	none
Dilution Water:	Hard Reconstituted Synthetic
Test duration:	7 days
Effect measured:	Survival and reproduction
Toxicity test methods and procedures were followed in accordance with EPA 600/4-89/001	
Reference Toxicant Data:	
NOEC (g/L NaCl):	0.75

---

**TEST RESULTS: CR-EC02-TX-201**  
***Ceriodaphnia dubia* Chronic Survival and Reproduction Test**

<b>Survival NOEC:</b>	100%
Statistical analysis method:	N/A
Normality test:	
Homogeneity of variance test:	
<b>Reproduction NOEC:</b>	100%
Statistical analysis method:	Steel's Many-One Rank
Normality test:	Pass
Homogeneity of variance test:	Fail

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Control	100	8.30-8.71	861 (748-983)	7.9 (7.2-8.4)	24.6 (24.0-25.2)
6.25	90	8.26-8.61	856 (755-956)	7.9 (7.1-8.7)	24.6 (24.0-25.2)
12.5	100	8.25-8.59	848 (763-933)	8.0 (7.3-8.6)	24.6 (24.0-25.2)
25	100	8.27-8.58	848 (768-928)	7.9 (7.2-8.6)	24.6 (24.0-25.2)
50	90	8.34-8.62	833 (777-889)	7.9 (7.1-8.6)	24.6 (24.0-25.2)
100	90	8.28-8.69	819 (796-842)	7.8 (7.0-8.6)	24.6 (24.0-25.2)

	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )	Ammonia (mg/L)
Control	150		
EC02	276	282	0.17

**TEST SUMMARY: CR-EC02-TX-201**  
***Pimephales promelas* 48-Hour Static Acute**

---

Test protocol:	WCC SOP 410.2
Test organism:	<i>Pimephales promelas</i>
Source:	Woodward-Clyde Consultants
Age of test organism:	13 days
Test initiation:	6/13/95
Test termination:	6/15/95
Temperature:	20 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	500 mL plastic beaker
Test volume:	250 mL
Organisms/replicate:	10
Replicates/concentration:	2
Feeding regime:	none
Aeration during test:	none
Dilution Water:	Hard Reconstituted Synthetic
Test duration:	48 hours
Effect measured:	Mortality
Reference Toxicant Data:	
LC <sub>50</sub> (g/L NaCl):	5.26

---

**TEST RESULTS: CR-EC02-TX-201**  
***Pimephales promelas* 48-Hour Static Acute**

LC<sub>50</sub> > 100%

Statistical analysis method: N/A

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )
Control	100	8.29-8.31	340 (327-353)	8.0 (7.4-8.5)	20.9 (20.8-21.0)	158	146
6.25	100	8.15-8.49	375 (357-392)	8.1 (8.1-8.1)	20.8 (20.8-20.8)		
12.5	100	8.12-8.59	402 (386-417)	8.1 (8.1-8.1)	20.8 (20.8-20.8)		
25	90	8.12-8.55	457 (442-472)	8.1 (8.1-8.1)	20.8 (20.8-20.8)		
50	100	8.24-8.65	577 (562-591)	8.1 (8.0-8.1)	20.8 (20.8-20.8)		
100	95	8.23-8.75	737 (652-822)	8.3 (8.1-8.4)	20.8 (20.8-20.8)	276	282

**SURFACE WATER SAMPLE ARRIVAL INFORMATION**

<b>Collection Date/Time:</b>	6/13/95 @ 1245
<b>Use Date/Time:</b>	6/14/95 @ 1510
<b>Method of Shipment:</b>	Overnight Courier
<b>Temperature (°C):</b>	2
<b>pH:</b>	8.13
<b>Ammonia (mg/L):</b>	0.1
<b>Conductivity (umhos/cm):</b>	1029
<b>DO (mg/L):</b>	8.2
<b>Description:</b>	Clear

**TEST SUMMARY: CR-EC02-TX-201**  
***Pimephales promelas* Chronic Renewal**

---

Test protocol:	WCC SOP 510.1
Test organism:	<i>Pimephales promelas</i>
Source:	Environmental Consulting & Testing
Age of test organism:	<24 hours
Test initiation:	6/15/95 @ 1620
Test termination:	6/22/95 @ 1430
Temperature:	25 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	500 mL plastic beaker
Test volume:	250 mL
Organisms/replicate:	10
Replicates/concentration:	4
Feeding regime:	0.1 mL brine shrimp nauplii twice daily
Aeration during test:	none
Dilution Water:	Hard Reconstituted Synthetic
Test duration:	7 days
Effect measured:	Survival and growth
Toxicity test methods and procedures were followed in accordance with EPA 600/4-89/001	
Reference Toxicant Data:	
NOEC (g/L NaCl):	3

---

**TEST RESULTS: CR-EC02-TX-201**  
***Pimephales promelas* Chronic Survival and Growth Test**

<b>Survival NOEC:</b>	100%
Statistical analysis method:	Dunnetts
Normality test:	Shapiro Wilks - Pass
Homogeneity of variance test:	Bartletts - Pass
<b>Growth NOEC:</b>	100%
Statistical analysis method:	Steel's Many-One Rank
Normality test:	Chi-Square - Pass
Homogeneity of variance test:	Bartletts - Fail

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Control	100	7.86-8.50	343 (309-366)	7.8 (6.6-8.4)	24.7 (24.0-25.2)
6.25	80	8.04-8.49	384 (357-434)	7.7 (6.3-8.5)	24.7 (24.0-25.2)
12.5	90	8.07-8.51	422 (361-449)	7.7 (6.5-8.6)	24.7 (24.0-25.2)
25	85	8.06-8.52	510 (474-546)	7.7 (6.4-8.6)	24.7 (24.0-25.2)
50	82.5	8.06-8.56	577 (546-608)	7.8 (6.1-8.6)	24.7 (24.0-25.2)
100	67.5	8.18-8.59	815 (773-857)	7.8 (6.4-8.6)	24.7 (24.0-25.2)

	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )	Ammonia (mg/L)
Control	150		
EC02	276	282	0.17

**TEST SUMMARY: SC-EE01-TX-201**  
***Ceriodaphnia dubia* 48-Hour Static Acute**

---

Test protocol:	SOP 401.2
Test organism:	<i>Ceriodaphnia dubia</i>
Source:	WCC Culture Laboratory
Age of test organism:	<24 hours
Test initiation:	6/13/95
Test termination:	6/15/95
Temperature:	25 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	30 mL styrene
Test volume:	20 mL
Organisms/replicate:	5
Replicates/concentration:	4
Feeding regime:	none
Aeration during test:	none
Dilution Water:	Hard Reconstituted Synthetic
Test duration:	48 hours
Effect measured:	Mortality
Reference Toxicant Data:	
LC <sub>50</sub> (g/L NaCl):	1.51

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**TEST RESULTS: SC-EE01-TX-201**  
***Ceriodaphnia dubia* 48-Hour Static Acute**

LC<sub>50</sub> > 100%

Statistical analysis method: N/A

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )
Control	100	7.64-8.28	500 (499-500)	8.4 (8.2-8.5)	24.8-25.0	140	
6.25	100	8.30-8.41	442 (437-446)	8.4 (8.3-8.5)	24.8-25.0		
12.5	100	8.31-8.42	437 (434-439)	8.5 (8.5-8.5)	24.8-25.0		
25	100	8.36-8.44	445 (437-452)	8.4 (8.2-8.5)	24.8-25.0		
50	100	8.47-8.50	439 (429-448)	8.4 (8.2-8.5)	24.8-25.0		
100	100	8.51-8.62	424 (409-439)	8.4 (8.2-8.6)	24.8-25.0	142	284

**SURFACE WATER SAMPLE ARRIVAL INFORMATION**

<b>Collection Date/Time:</b>	6/12/95 @ 0945
<b>Use Date/Time:</b>	6/13/95 @ 1430
<b>Method of Shipment:</b>	Overnight Courier
<b>Temperature (°C):</b>	1.5
<b>pH:</b>	8.51
<b>Ammonia (mg/L):</b>	12.5
<b>Conductivity (umhos/cm):</b>	390
<b>DO (mg/L):</b>	8.6

**TEST SUMMARY: SC-EE01-TX-201**  
***Ceriodaphnia dubia* Chronic Renewal**

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Test protocol:	WCC - 501.1
Test organism:	<i>Ceriodaphnia dubia</i>
Source:	WCC Culture Laboratory
WCC Batch:	6/17/95 to 6/18/95
Age of test organism:	<24 hours
Test initiation:	6/18/95
Test termination:	6/26/95
Temperature:	25 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	30 mL styrene
Test volume:	15 mL
Organisms/replicate:	1
Replicates/concentration:	10
Feeding regime:	0.05 mL <i>Selenastrum</i> and 0.05 mL YTC daily
Aeration during test:	none
Dilution Water:	Hard Reconstituted Synthetic
Test duration:	7 days
Effect measured:	Survival and reproduction
Toxicity test methods and procedures were followed in accordance with EPA 600/4-89/001	
Reference Toxicant Data:	
NOEC (g/L NaCl):	0.75

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**TEST RESULTS: SC-EE01-TX-201**  
***Ceriodaphnia dubia* Chronic Survival and Reproduction Test**

**Survival NOEC:**

Statistical analysis method:	100%
Normality test:	Fishers Exact
Homogeneity of variance test:	

**Reproduction NOEC:**

Statistical analysis method:	12.5% *
Normality test:	Dunnetts
Homogeneity of variance test:	Pass

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Control	100	7.99-8.54	442 (402-482)	8.1 (7.3-8.8)	24.7 (24.2-25.2)
6.25	100	7.91-8.50	439 (419-459)	8.1 (7.4-8.8)	24.7 (24.2-25.2)
12.5	100	7.92-8.50	429 (395-463)	8.0 (7.3-8.7)	24.7 (24.2-25.2)
25	100	8.02-8.52	426 (401-451)	8.1 (7.3-8.8)	24.7 (24.2-25.2)
50	90	8.10-8.55	421 (388-453)	8.1 (7.4-8.8)	24.7 (24.2-25.2)
100	100	8.14-8.58	400 (345-454)	8.1 (7.3-8.8)	24.7 (24.2-25.2)

\* : Non-monotonic response curve

Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )	Ammonia (mg/L)
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Control	150	
EE01	142	284

**TEST SUMMARY: SC-EE01-TX-201**  
***Pimephales promelas* 48-Hour Static Acute**

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Test protocol:	WCC - 410.2
Test organism:	<i>Pimephales promelas</i>
Source:	Woodward-Clyde Consultants
Age of test organism:	6 days
Test initiation:	6/13/95
Test termination:	6/15/95
Temperature:	20 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	500 mL plastic beaker
Test volume:	250 mL
Organisms/replicate:	10
Replicates/concentration:	2
Feeding regime:	none
Aeration during test:	none
Dilution Water:	Spring Water
Test duration:	48 hours
Effect measured:	Mortality
Reference Toxicant Data:	
LC <sub>50</sub> (g/L NaCl):	5.26

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**TEST RESULTS: SC-EE01-TX-201**  
***Pimephales promelas* 48-Hour Static Acute**

LC<sub>50</sub>> 100%

Statistical analysis method: N/A

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )	Ammonia (mg/L)
Control	95	7.65-8.45	351 (343-359)	8.3 (8.0-8.5)	20.9 (20.8-21.0)	158	146	
6.25	95	7.84-8.40	343 (331-354)	8.3 (8.1-8.5)	20.9 (20.8-21.0)			
12.5	95	7.93-8.42	350 (335-364)	8.4 (8.2-8.5)	20.9 (20.8-21.0)			
25	90	7.97-8.46	361 (344-377)	8.3 (8.1-8.5)	20.9 (20.8-21.0)			
50	95	8.06-8.51	376 (360-391)	8.3 (7.9-8.6)	20.9 (20.8-21.0)			
100	100	8.22-8.58	408 (390-426)	8.3 (7.9-8.7)	20.9 (20.8-21.0)	142	284	12.5

**SURFACE WATER SAMPLE ARRIVAL INFORMATION**

<b>Collection Date/Time:</b>	6/12/95 @ 0945
<b>Use Date/Time:</b>	6/13/95 @ 1445
<b>Method of Shipment:</b>	Overnight Courier
<b>Temperature (°C):</b>	1.5
<b>pH:</b>	8.51
<b>Ammonia (mg/L):</b>	12.5
<b>Conductivity (umhos/cm):</b>	390
<b>DO (mg/L):</b>	8.6
<b>Description:</b>	Clear

**TEST SUMMARY: SC-EE01-TX-201**  
***Pimephales promelas* Chronic Renewal**

---

Test protocol:	WCC - 510.1
Test organism:	<i>Pimephales promelas</i>
Source:	Environmental Consulting & Testing
Age of test organism:	<24 hours
Test initiation:	6/15/95 @ 1600
Test termination:	6/22/95 @ 1500
Temperature:	25 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	500 mL plastic beaker
Test volume:	250 mL
Organisms/replicate:	10
Replicates/concentration:	4
Feeding regime:	0.1 mL brine shrimp nauplii twice daily
Aeration during test:	none
Dilution Water:	Spring Water
Test duration:	7 days
Effect measured:	Survival and growth
Toxicity test methods and procedures were followed in accordance with EPA 600/4-89/001	
Reference Toxicant Data:	
NOEC (g/L NaCl):	3.0

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**TEST RESULTS - SC-EE01-TX-201**  
***Pimephales promelas* Chronic Survival and Growth Test**

**Survival NOEC:**

Statistical analysis method:	100%
Normality test:	Steel's Many-One Rank Test
Homogeneity of variance test:	Pass

**Growth NOEC:**

Statistical analysis method:	50%
Normality test:	Dunnett's
Homogeneity of variance test:	Pass

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Control	92.5	7.99-8.41	348 (316-379)	7.7 (7.0-8.4)	24.6 (24.0-25.2)
6.25	92.5	8.02-8.41	345 (314-376)	7.7 (6.9-8.4)	24.6 (24.0-25.2)
12.5	95	8.09-8.43	338 (304-371)	7.8 (7.1-8.5)	24.6 (24.0-25.2)
25	95	8.09-8.51	347 (320-374)	7.8 (7.1-8.5)	24.6 (24.0-25.2)
50	97.5	8.14-8.77	368 (342-393)	7.9 (7.2-8.5)	24.6 (24.0-25.2)
100	100	8.24-8.80	388 (362-414)	7.9 (7.2-8.5)	24.6 (24.0-25.2)

SC-EE01-TX-201:	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )	Ammonia (mg/L)
	142	284	12.5

**TEST SUMMARY: SC-EE02-TX-201**  
***Ceriodaphnia dubia* 48-Hour Static Acute**

---

Test protocol:	SOP 401.2
Test organism:	<i>Ceriodaphnia dubia</i>
Source:	WCC Culture Laboratory
Age of test organism:	<24 hours
Test initiation:	6/13/95
Test termination:	6/15/95
Temperature:	25 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	30 mL styrene
Test volume:	20 mL
Organisms/replicate:	5
Replicates/concentration:	4
Feeding regime:	none
Aeration during test:	none
Dilution Water:	Hard Reconstituted Synthetic
Test duration:	48 hours
Effect measured:	Mortality
Reference Toxicant Data:	
LC <sub>50</sub> (g/L NaCl):	1.51

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**TEST RESULTS: SC-EE02-TX-201**  
***Ceriodaphnia dubia* 48-Hour Static Acute**

LC<sub>50</sub> > 100%

Statistical analysis method: N/A

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )
Control	100	8.54-8.54	714 (689-739)	8.4 (8.2-8.5)	24.8-25.0	250	
6.25	100	8.51-8.52	672 (658-686)	8.4 (8.3-8.5)	24.8-25.0		
12.5	100	8.51-8.53	675 (673-676)	8.4 (8.3-8.5)	24.8-25.0		
25	100	8.53-8.54	663 (661-665)	8.4 (8.3-8.5)	24.8-25.0		
50	100	8.49-8.54	606 (603-609)	8.4 (8.3-8.5)	24.8-25.0		
100	100	8.45-8.56	509 (496-522)	8.3 (8.0-8.5)	24.8-25.0	252	176

**SURFACE WATER SAMPLE ARRIVAL INFORMATION**

<b>Collection Date/Time:</b>	6/12/95 @ 1130
<b>Use Date/Time:</b>	6/13/95 @ 1510
<b>Method of Shipment:</b>	Overnight Courier
<b>Temperature (°C):</b>	2.5
<b>pH:</b>	8.45
<b>Ammonia (mg/L):</b>	2.07
<b>Conductivity (umhos/cm):</b>	522
<b>DO (mg/L):</b>	8.5

**TEST SUMMARY: SC-EE02-TX-201**  
***Ceriodaphnia dubia* Chronic Renewal**

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Test protocol:	WCC - 501.1
Test organism:	<i>Ceriodaphnia dubia</i>
Source:	WCC Culture Laboratory
WCC Batch:	6/14/95 to 6/15/95
Age of test organism:	<24 hours
Test initiation:	6/15/95
Test termination:	6/22/95
Temperature:	25 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	30 mL styrene
Test volume:	15 mL
Organisms/replicate:	1
Replicates/concentration:	10
Feeding regime:	0.05 mL <i>Selenastrum</i> and 0.05 mL YTC daily
Aeration during test:	none
Dilution Water:	Hard Reconstituted Synthetic
Test duration:	7 days
Effect measured:	Survival and reproduction
Toxicity test methods and procedures were followed in accordance with EPA 600/4-89/001	
Reference Toxicant Data:	
NOEC (g/L NaCl):	0.75

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**TEST RESULTS: SC-EE02-TX-201**  
***Ceriodaphnia dubia* Chronic Survival and Reproduction Test**

**Survival NOEC:**

Statistical analysis method:	Steel's Many-One Rank
Normality test:	Pass
Homogeneity of variance test:	Fail

**Reproduction NOEC:**

Statistical analysis method:	Dunnett's
Normality test:	Pass
Homogeneity of variance test:	Pass

\* : Non-monotonic response curve

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Control	100	8.25-8.62	763 (650-875)	7.8 (7.1-8.5)	24.6 (24.0-25.2)
6.25	70	8.24-8.62	717 (617-817)	7.9 (7.3-8.5)	24.6 (24.0-25.2)
12.5	70	8.24-8.61	708 (581-835)	7.9 (7.3-8.4)	24.6 (24.0-25.2)
25	80	8.25-8.60	686 (572-800)	7.8 (7.2-8.4)	24.6 (24.0-25.2)
50	70	8.28-8.56	594 (484-704)	7.8 (7.2-8.4)	24.6 (24.0-25.2)
100	100	8.30-8.54	439 (335-542)	7.9 (7.2-8.5)	24.6 (24.0-25.2)

Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )	Ammonia (mg/L)
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Control	250	
EE02	252	176

**TEST SUMMARY: SC-EE02-TX-201**  
***Pimephales promelas* 48-Hour Static Acute**

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Test protocol:	WCC - 410.2
Test organism:	<i>Pimephales promelas</i>
Source:	Woodward-Clyde Consultants
Age of test organism:	6 days
Test initiation:	6/13/95
Test termination:	6/15/95
Temperature:	20 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	500 mL plastic beaker
Test volume:	250 mL
Organisms/replicate:	10
Replicates/concentration:	2
Feeding regime:	none
Aeration during test:	none
Dilution Water:	Spring Water
Test duration:	48 hours
Effect measured:	Mortality
Reference Toxicant Data:	
LC <sub>50</sub> (g/L NaCl):	5.26

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**TEST RESULTS: SC-EE02-TX-201**  
***Pimephales promelas* 48-Hour Static Acute**

LC<sub>50</sub> > 100%

Statistical analysis method: N/A

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )	Ammonia (mg/L)
Control	95	7.65-8.45	351 (343-359)	8.3 (8.0-8.5)	20.9 (20.8-21.0)	158	146	
6.25	100	8.05-8.43	350 (342-357)	8.0 (8.0-8.0)	20.9 (20.8-21.0)			
12.5	100	8.03-8.44	358 (351-365)	8.0 (8.0-8.0)	20.9 (20.8-21.0)			
25	95	8.05-8.46	376 (368-383)	8.0 (8.0-8.0)	20.9 (20.8-21.0)			
50	95	8.16-8.49	422 (411-432)	8.2 (8.1-8.2)	20.9 (20.8-21.0)			
100	95	8.29-8.53	502 (490-513)	8.2 (8.1-8.3)	20.9 (20.8-21.0)	252	176	2.07

**SURFACE WATER SAMPLE ARRIVAL INFORMATION**

<b>Collection Date/Time:</b>	6/12/95 @ 1130
<b>Use Date/Time:</b>	6/13/95 @ 1515
<b>Method of Shipment:</b>	Overnight Courier
<b>Temperature (°C):</b>	2.5
<b>pH:</b>	8.45
<b>Ammonia (mg/L):</b>	2.07
<b>Conductivity (umhos/cm):</b>	490
<b>DO (mg/L):</b>	8.5
<b>Description:</b>	Clear

**TEST SUMMARY: SC-EE02-TX-201**  
***Pimephales promelas* Chronic Renewal**

---

Test protocol:	WCC - 510.1
Test organism:	<i>Pimephales promelas</i>
Source:	Environmental Consulting & Testing
Age of test organism:	<24 hours
Test initiation:	6/15/95 @ 1600
Test termination:	6/22/95 @ 1500
Temperature:	25 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	500 mL plastic beaker
Test volume:	250 mL
Organisms/replicate:	10
Replicates/concentration:	4
Feeding regime:	0.1 mL brine shrimp nauplii twice daily
Aeration during test:	none
Dilution Water:	Spring Water
Test duration:	7 days
Effect measured:	Survival and growth
Toxicity test methods and procedures were followed in accordance with EPA 600/4-89/001	
Reference Toxicant Data:	
NOEC (g/L NaCl):	3.0

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**TEST RESULTS - SC-EE02-TX-201**  
***Pimephales promelas* Chronic Survival and Growth Test**

**Survival NOEC:**

Statistical analysis method:	100%
Normality test:	Steel's Many-One Rank Test
Homogeneity of variance test:	Pass

**Growth NOEC:**

Statistical analysis method:	<6.25%*
Normality test:	Dunnett's
Homogeneity of variance test:	Pass

\* : Non-monotonic response curve

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Control	92.5	7.99-8.41	348 (316-379)	7.7 (7.0-8.4)	24.6 (24.0-25.2)
6.25	97.5	8.03-8.42	359 (320-398)	7.7 (7.0-8.3)	24.6 (24.0-25.2)
12.5	100	8.09-8.43	357 (333-380)	7.7 (7.0-8.4)	24.6 (24.0-25.2)
25	100	8.04-8.43	375 (353-396)	7.6 (6.9-8.3)	24.6 (24.0-25.2)
50	95	8.06-8.47	403 (370-435)	7.6 (6.8-8.3)	24.6 (24.0-25.2)
100	97.5	8.20-8.51	467 (411-523)	7.9 (6.9-8.8)	24.6 (24.0-25.2)

	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )	Ammonia (mg/L)
SC-EE02-TX-201:	252	176	2.07

**TEST SUMMARY: SC-EE03-TX-201**  
***Ceriodaphnia dubia* 48-Hour Static Acute**

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Test protocol:	SOP 401.2
Test organism:	<i>Ceriodaphnia dubia</i>
Source:	WCC Culture Laboratory
Age of test organism:	<24 hours
Test initiation:	6/13/95
Test termination:	6/15/95
Temperature:	25 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	30 mL styrene
Test volume:	20 mL
Organisms/replicate:	5
Replicates/concentration:	4
Feeding regime:	none
Aeration during test:	none
Dilution Water:	Hard Reconstituted Synthetic
Test duration:	48 hours
Effect measured:	Mortality
Reference Toxicant Data:	
LC <sub>50</sub> (g/L NaCl):	1.51

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**TEST RESULTS: SC-EE03-TX-201**  
***Ceriodaphnia dubia* 48-Hour Static Acute**

LC<sub>50</sub>> 100%

Statistical analysis method: N/A

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )
Control	100	8.57-8.62	777 (764-790)	8.4 (8.3-8.5)	24.8-25.0	270	
6.25	100	8.57-8.63	770 (753-786)	8.4 (8.3-8.5)	24.8-25.0		
12.5	100	8.58-8.62	778 (767-788)	8.5 (8.4-8.5)	24.8-25.0		
25	100	8.58-8.60	754 (750-758)	8.4 (8.3-8.5)	24.8-25.0		
50	100	8.55-8.63	739 (699-779)	8.3 (8.1-8.5)	24.8-25.0		
100	100	8.51-8.63	620 (595-644)	8.4 (8.2-8.5)	24.8-25.0	272	190

**SURFACE WATER SAMPLE ARRIVAL INFORMATION**

<b>Collection Date/Time:</b>	6/12/95 @ 0900
<b>Use Date/Time:</b>	6/13/95 @ 1500
<b>Method of Shipment:</b>	Overnight Courier
<b>Temperature (°C):</b>	2.0
<b>pH:</b>	8.51
<b>Ammonia (mg/L):</b>	0.93
<b>Conductivity (umhos/cm):</b>	644
<b>DO (mg/L):</b>	8.5

**TEST SUMMARY: SC-EE03-TX-201**  
***Ceriodaphnia dubia* Chronic Renewal**

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Test protocol:	WCC - 501.1
Test organism:	<i>Ceriodaphnia dubia</i>
Source:	WCC Culture Laboratory
WCC Batch:	6/14/95 to 6/15/95
Age of test organism:	<24 hours
Test initiation:	6/15/95
Test termination:	6/22/95
Temperature:	25 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	30 mL styrene
Test volume:	15 mL
Organisms/replicate:	1
Replicates/concentration:	10
Feeding regime:	0.05 mL <i>Selenastrum</i> and 0.05 mL YTC daily
Aeration during test:	none
Dilution Water:	Hard Reconstituted Synthetic
Test duration:	7 days
Effect measured:	Survival and reproduction
Toxicity test methods and procedures were followed in accordance with EPA 600/4-89/001	
Reference Toxicant Data:	
NOEC (g/L NaCl):	0.75

---

**TEST RESULTS: SC-EE03-TX-201**  
***Ceriodaphnia dubia* Chronic Survival and Reproduction Test**

**Survival NOEC:**

Statistical analysis method:	100%
Normality test:	Steel's Many-One Rank
Homogeneity of variance test:	Fail

**Reproduction NOEC:**

Statistical analysis method:	<6.25% *
Normality test:	Steel's Many-One Rank
Homogeneity of variance test:	Pass

\* : Non-monotonic response curve

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Control	100	8.24-8.73	493 (452-944)	7.9 (7.2-8.6)	24.6 (24.0-25.2)
6.25	90	8.33-8.72	828 (738-918)	7.9 (7.2-8.5)	24.6 (24.0-25.2)
12.5	80	8.31-8.71	817 (731-902)	7.9 (7.2-8.5)	24.6 (24.0-25.2)
25	80	8.32-8.69	795 (711-878)	7.9 (7.2-8.5)	24.6 (24.0-25.2)
50	70	8.33-8.66	594 (667-810)	7.9 (7.2-8.5)	24.6 (24.0-25.2)
100	100	8.34-8.61	621 (566-675)	7.8 (7.0-8.6)	24.6 (24.0-25.2)

Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )	Ammonia (mg/L)
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Control	270	
EE03	272	190      0.93

**TEST SUMMARY: SC-EE03-TX-201**  
***Pimephales promelas* 48-Hour Static Acute**

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Test protocol:	WCC - 410.2
Test organism:	<i>Pimephales promelas</i>
Source:	Woodward-Clyde Consultants
Age of test organism:	6 days
Test initiation:	6/13/95
Test termination:	6/15/95
Temperature:	20 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	500 mL plastic beaker
Test volume:	250 mL
Organisms/replicate:	10
Replicates/concentration:	2
Feeding regime:	none
Aeration during test:	none
Dilution Water:	Spring Water
Test duration:	48 hours
Effect measured:	Mortality
Reference Toxicant Data:	
LC <sub>50</sub> (g/L NaCl):	5.26

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**TEST RESULTS: SC-EE03-TX-201**  
***Pimephales promelas* 48-Hour Static Acute**

LC<sub>50</sub> > 100%

Statistical analysis method: N/A

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )	Ammonia (mg/L)
Control	95	7.65-8.45	351 (343-359)	8.3 (8.0-8.5)	20.9 (20.8-20.9)	158	146	
6.25	90	8.13-8.46	377 (359-395)	8.2 (8.1-8.2)	20.9 (20.8-20.9)			
12.5	95	8.12-8.46	379 (369-389)	8.2 (8.1-8.3)	20.9 (20.8-20.9)			
25	95	8.15-8.49	415 (405-425)	8.2 (8.1-8.2)	20.9 (20.8-20.9)			
50	100	8.19-8.42	494 (482-506)	8.2 (8.1-8.3)	20.9 (20.8-20.9)			
100	100	8.38-8.53	626 (602-650)	8.2 (8.0-8.3)	20.9 (20.8-20.9)	272	190	0.93

**SURFACE WATER SAMPLE ARRIVAL INFORMATION**

<b>Collection Date/Time:</b>	6/12/95 @ 0900
<b>Use Date/Time:</b>	6/13/95 @ 1415
<b>Method of Shipment:</b>	Overnight Courier
<b>Temperature (°C):</b>	2.0
<b>pH:</b>	8.51
<b>Ammonia (mg/L):</b>	0.93
<b>Conductivity (umhos/cm):</b>	602
<b>DO (mg/L):</b>	8.5
<b>Description:</b>	Clear

**TEST SUMMARY: SC-EE03-TX-201**  
***Pimephales promelas* Chronic Renewal**

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Test protocol:	WCC - 510.1
Test organism:	<i>Pimephales promelas</i>
Source:	Environmental Consulting & Testing
Age of test organism:	<24 hours
Test initiation:	6/15/95 @ 1520
Test termination:	6/22/95 @ 1500
Temperature:	25 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	500 mL plastic beaker
Test volume:	250 mL
Organisms/replicate:	10
Replicates/concentration:	4
Feeding regime:	0.1 mL brine shrimp nauplii twice daily
Aeration during test:	none
Dilution Water:	Spring Water
Test duration:	7 days
Effect measured:	Survival and growth
Toxicity test methods and procedures were followed in accordance with EPA 600/4-89/001	
Reference Toxicant Data:	
NOEC (g/L NaCl):	3.0

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**TEST RESULTS : SC-EE03-TX-201**  
***Pimephales promelas* Chronic Survival and Growth Test**

**Survival NOEC:**

Statistical analysis method:	100%
Normality test:	Steel's Many-One Rank Test
Homogeneity of variance test:	Pass

**Growth NOEC:**

Statistical analysis method:	100%
Normality test:	Dunnett's
Homogeneity of variance test:	Pass

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Control	92.5	7.99-8.41	348 (316-379)	7.7 (7.0-8.4)	24.6 (24.0-25.2)
6.25	100	7.96-8.51	376 (334-417)	7.4 (6.2-8.5)	24.6 (24.0-25.2)
12.5	100	7.97-8.50	399 (355-442)	7.4 (6.2-8.6)	24.6 (24.0-25.2)
25	100	8.02-8.50	417 (392-442)	7.2 (5.8-8.5)	24.6 (24.0-25.2)
50	97.5	8.02-8.51	488 (461-514)	7.2 (5.8-8.5)	24.6 (24.0-25.2)
100	92.5	8.01-8.52	626 (590-661)	6.8 (5.0-8.5)	24.6 (24.0-25.2)

	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )	Ammonia (mg/L)
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SC-EE03-TX-201:

272	190	0.93
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**TEST SUMMARY: SC-EE04-TX-201**  
***Ceriodaphnia dubia* 48-Hour Static Acute**

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Test protocol:	WCC SOP 401.2
Test organism:	<i>Ceriodaphnia dubia</i>
Source:	WCC Culture Laboratory
Age of test organism:	<24 hours
Test initiation:	6/13/95
Test termination:	6/15/95
Temperature:	25 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	30 mL styrene
Test volume:	20 mL
Organisms/replicate:	5
Replicates/concentration:	4
Feeding regime:	none
Aeration during test:	none
Dilution Water:	Hard Reconstituted Synthetic
Test duration:	48 hours
Effect measured:	Mortality
Reference Toxicant Data:	
LC <sub>50</sub> (g/L NaCl):	1.51

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**TEST RESULTS: SC-EE04-TX-201**  
***Ceriodaphnia dubia* 48-Hour Static Acute**

LC<sub>50</sub> > 100%

Statistical analysis method: N/A

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )
Control	100	8.49-8.54	580 (578-582)	8.4 (8.2-8.5)	24.8-25.0	200	
6.25	100	8.47-8.55	563 (558-568)	8.4 (8.3-8.5)	24.8-25.0		
12.5	100	8.48-8.53	559 (550-568)	8.4 (8.3-8.5)	24.8-25.0		
25	100	8.50-8.53	543 (535-551)	8.5 (8.4-8.5)	24.8-25.0		
50	100	8.50-8.53	512 (492-531)	8.5 (8.4-8.5)	24.8-25.0		
100	100	8.48-8.64	466 (458-474)	8.4 (8.2-8.5)	24.8-25.0	204	186

**SURFACE WATER SAMPLE ARRIVAL INFORMATION**

<b>Collection Date/Time:</b>	6/12/95 @ 0700
<b>Use Date/Time:</b>	6/13/95 @ 1515
<b>Method of Shipment:</b>	Overnight Courier
<b>Temperature (°C):</b>	2.5
<b>pH:</b>	8.48
<b>Ammonia (mg/L):</b>	0.56
<b>Conductivity (umhos/cm):</b>	458
<b>DO (mg/L):</b>	8.5

**TEST SUMMARY: SC-EE04-TX-201**  
***Ceriodaphnia dubia* Chronic Renewal**

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Test protocol:	WCC SOP 501.1
Test organism:	<i>Ceriodaphnia dubia</i>
Source:	WCC Culture Laboratory
WCC Batch:	6/14/95
Age of test organism:	<24 hours
Test initiation:	6/15/95
Test termination:	6/22/95
Temperature:	25 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	30 mL styrene
Test volume:	15 mL
Organisms/replicate:	1
Replicates/concentration:	10
Feeding regime:	0.05 mL <i>Selenastrum</i> and 0.05 mL YTC daily
Aeration during test:	none
Dilution Water:	Hard Reconstituted Synthetic
Test duration:	7 days
Effect measured:	Survival and reproduction
Toxicity test methods and procedures were followed in accordance with EPA 600/4-89/001	
Reference Toxicant Data:	
NOEC (g/L NaCl):	0.75

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**TEST RESULTS: SC-EE04-TX-201**  
***Ceriodaphnia dubia* Chronic Survival and Reproduction Test**

**Survival NOEC:**

Statistical analysis method:	100%
Normality test:	Fishers Exact
Homogeneity of variance test:	Fail

**Reproduction NOEC:**

Statistical analysis method:	<6.25% *
Normality test:	Dunnett's
Homogeneity of variance test:	Pass

\* : Non-monotonic response curve

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Control	90	8.23-8.69	636 (554-718)	8.0 (7.3-8.6)	24.6 (24.0-25.2)
6.25	80	8.22-8.67	619 (536-701)	8 (7.3-8.6)	24.6 (24.0-25.2)
12.5	70	8.21-8.67	603 (530-675)	8.0 (7.4-8.6)	24.6 (24.0-25.2)
25	90	8.21-8.65	581 (517-644)	8.0 (7.4-8.6)	24.6 (24.0-25.2)
50	100	8.21-8.63	535 (489-581)	8.0 (7.4-8.6)	24.6 (24.0-25.2)
100	100	8.29-8.68	457 (437-477)	8.1 (7.5-8.6)	24.6 (24.0-25.2)

Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )	Ammonia (mg/L)
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Control	200		
EE04	204	186	0.56

**TEST SUMMARY: SC-EE04-TX-201**  
***Pimephales promelas* 48-Hour Static Acute**

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Test protocol:	WCC SOP 410.2
Test organism:	<i>Pimephales promelas</i>
Source:	Woodward-Clyde Consultants
Age of test organism:	6 days
Test initiation:	6/13/95
Test termination:	6/15/95
Temperature:	20 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	500 mL plastic beaker
Test volume:	250 mL
Organisms/replicate:	10
Replicates/concentration:	2
Feeding regime:	none
Aeration during test:	none
Dilution Water:	Spring Water
Test duration:	48 hours
Effect measured:	Mortality
Reference Toxicant Data:	
LC <sub>50</sub> (g/L NaCl):	5.26

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**TEST RESULTS: SC-EE04-TX-201**  
***Pimephales promelas* 48-Hour Static Acute**

LC<sub>50</sub> > 100%

Statistical analysis method: N/A

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )
Control	95	7.65-8.45	351 (343-359)	8.3 (8.0-8.5)	20.9 (20.8-21.0)	158	146
6.25	100	8.11-8.48	378 (362-394)	8.1 (8.0-8.2)	20.9 (20.8-21.0)		
12.5	95	8.18-8.46	355 (331-379)	8.1 (8.0-8.2)	20.9 (20.8-21.0)		
25	100	8.20-8.50	373 (355-390)	8.2 (8.1-8.2)	20.9 (20.8-21.0)		
50	95	8.21-8.42	402 (378-426)	8.2 (8.1-8.2)	20.9 (20.8-21.0)		
100	100	8.33-8.61	447 (412-481)	8.2 (8.1-8.3)	20.9 (20.8-21.0)	204	186

**SURFACE WATER SAMPLE ARRIVAL INFORMATION**

<b>Collection Date/Time:</b>	6/12/95 @ 0700
<b>Use Date/Time:</b>	6/13/95 @ 1410
<b>Method of Shipment:</b>	Overnight Courier
<b>Temperature (°C):</b>	2.5
<b>pH:</b>	8.48
<b>Ammonia (mg/L):</b>	0.56
<b>Conductivity (umhos/cm):</b>	412
<b>DO (mg/L):</b>	8.5
<b>Description:</b>	Clear

**TEST SUMMARY: SC-EE04-TX-201**  
***Pimephales promelas* Chronic Renewal**

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Test protocol:	WCC SOP 510.1
Test organism:	<i>Pimephales promelas</i>
Source:	Environmental Consulting & Testing
Age of test organism:	<24 hours
Test initiation:	6/15/95 @ 1515
Test termination:	6/22/95 @ 1500
Temperature:	25 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	500 mL plastic beaker
Test volume:	250 mL
Organisms/replicate:	10
Replicates/concentration:	4
Feeding regime:	0.1 mL brine shrimp nauplii twice daily
Aeration during test:	none
Dilution Water:	Spring Water
Test duration:	7 days
Effect measured:	Survival and growth
Toxicity test methods and procedures were followed in accordance with EPA 600/4-89/001	
Reference Toxicant Data:	
NOEC (g/L NaCl):	3.0

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**TEST RESULTS : SC- EE04-TX-201**  
***Pimephales promelas* Chronic Survival and Growth Test**

**Survival NOEC:**

Statistical analysis method:	100%
Normality test:	Steel's Many-One Rank Test
Homogeneity of variance test:	Pass

**Growth NOEC:**

Statistical analysis method:	100%
Normality test:	Steel's Many-One Rank Test
Homogeneity of variance test:	Fail

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Control	92.5	7.99-8.41	348 (316-379)	7.7 (7.0-8.4)	24.6 (24.0-25.2)
6.25	100	8.00-8.48	353 (340-366)	7.6 (6.6-8.5)	24.6 (24.0-25.2)
12.5	90	8.00-8.48	356 (329-382)	7.6 (6.7-8.5)	24.6 (24.0-25.2)
25	95	8.05-8.51	369 (344-394)	7.6 (6.6-8.6)	24.6 (24.0-25.2)
50	97.5	8.09-8.52	400 (365-435)	7.7 (6.7-8.6)	24.6 (24.0-25.2)
100	65	8.14-8.56	451 (391-511)	7.7 (6.7-8.6)	24.6 (24.0-25.2)

Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )	Ammonia (mg/L)
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Control	200	
EE04	204	186

**TEST SUMMARY: SC-EE05-TX-201**  
***Ceriodaphnia dubia* 48-Hour Static Acute**

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Test protocol:	WCC SOP 401.2
Test organism:	<i>Ceriodaphnia dubia</i>
Source:	WCC Culture Laboratory
Age of test organism:	<24 hours
Test initiation:	6/9/95
Test termination:	6/11/95
Temperature:	25 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	30 mL styrene
Test volume:	20 mL
Organisms/replicate:	5
Replicates/concentration:	4
Feeding regime:	none
Aeration during test:	none
Dilution Water:	Hard Reconstituted Synthetic
Test duration:	48 hours
Effect measured:	Mortality
Reference Toxicant Data:	
LC <sub>50</sub> (g/L NaCl):	1.51

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**TEST RESULTS: SC-EE05-TX-201**  
***Ceriodaphnia dubia* 48-Hour Static Acute**

LC<sub>50</sub> > 100%

Statistical analysis method: N/A

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )
Control	100	8.17-8.19	451 (437-464)	8.4 (8.2-8.6)	24.6-24.6	120	
6.25	100	7.89-8.34	436 (430-442)	8.4 (8.3-8.4)	24.6-24.6		
12.5	85	8.36-8.39	457 (447-467)	8.4 (8.3-8.5)	24.6-24.6		
25	70	8.39-8.50	431 (422-440)	8.4 (8.3-8.5)	24.6-24.6		
50	70	8.00-8.41	396 (382-410)	8.4 (8.3-8.4)	24.6-24.6		
100	100	7.76-8.51	379 (334-424)	8.4 (8.3-8.4)	24.6-24.6	146	134

**SURFACE WATER SAMPLE ARRIVAL INFORMATION**

<b>Collection Date/Time:</b>	6/8/95 @ 1600
<b>Use Date/Time:</b>	6/9/95 @ 1310
<b>Method of Shipment:</b>	Overnight Courier
<b>Temperature (°C):</b>	2.5
<b>pH:</b>	8.53
<b>Ammonia (mg/L):</b>	14.3
<b>Conductivity (umhos/cm):</b>	424
<b>DO (mg/L):</b>	8.3

**TEST SUMMARY: SC-EE05-TX-201**  
***Ceriodaphnia dubia* Chronic Renewal**

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Test protocol:	WCC SOP 501.1
Test organism:	<i>Ceriodaphnia dubia</i>
Source:	WCC Culture Laboratory
WCC Batch:	6/11/95
Age of test organism:	<24 hours
Test initiation:	6/12/95
Test termination:	6/19/95
Temperature:	25 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	30 mL styrene
Test volume:	15 mL
Organisms/replicate:	1
Replicates/concentration:	10
Feeding regime:	0.05 mL <i>Selenastrum</i> and 0.05 mL YTC daily
Aeration during test:	none
Dilution Water:	Hard Reconstituted Synthetic
Test duration:	7 days
Effect measured:	Survival and reproduction
Toxicity test methods and procedures were followed in accordance with EPA 600/4-89/001	
Reference Toxicant Data:	
NOEC (g/L NaCl):	0.75

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**TEST RESULTS: SC-EE05-TX-201**  
***Ceriodaphnia dubia* Chronic Survival and Reproduction Test**

**Survival NOEC:**

Statistical analysis method:	6.25%*
Normality test:	Fishers Exact
Homogeneity of variance test:	Fail

**Reproduction NOEC:**

Statistical analysis method:	<6.25% *
Normality test:	Dunnett's
Homogeneity of variance test:	Pass

\* : Non-monotonic response curve

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Control	100	7.46-8.42	511 (415-606)	8.0 (7.2-8.8)	24.5 (24.0-25.0)
6.25	80	7.63-8.44	465 (411-519)	8.0 (7.3-8.7)	24.5 (24.0-25.0)
12.5	50	7.71-8.49	431 (358-504)	8.0 (7.3-8.7)	24.5 (24.0-25.0)
25	70	7.95-8.53	413 (363-463)	8.0 (7.3-8.6)	24.5 (24.0-25.0)
50	80	8.02-8.62	388 (354-422)	8.0 (7.4-8.5)	24.5 (24.0-25.0)
100	80	8.13-8.72	310 (273-346)	8.2 (7.4-8.9)	24.5 (24.0-25.0)

Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )	Ammonia (mg/L)
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Control	120		
EE05	146	134	14.3

**TEST SUMMARY: SC-EE05-TX-201**  
***Pimephales promelas* 48-Hour Static Acute**

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Test protocol:	WCC SOP 410.2
Test organism:	<i>Pimephales promelas</i>
Source:	Woodward-Clyde Consultants
Age of test organism:	6 days
Test initiation:	6/9/95
Test termination:	6/11/95
Temperature:	20 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	500 mL plastic beaker
Test volume:	250 mL
Organisms/replicate:	10
Replicates/concentration:	2
Feeding regime:	none
Aeration during test:	none
Dilution Water:	Spring Water
Test duration:	48 hours
Effect measured:	Mortality
Reference Toxicant Data:	
LC <sub>50</sub> (g/L NaCl):	5.26

---

**TEST RESULTS: SC-EE05-TX-201**  
***Pimephales promelas* 48-Hour Static Acute**

LC<sub>50</sub> > 100%

Statistical analysis method: N/A

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )	Ammonia (mg/L)
Control	95	8.25-8.28	342 (317-366)	8.0 (7.9-8.1)	20.0 (20.0-20.0)	158	146	
6.25	85	8.27-8.46	328 (313-343)	8.0 (7.9-8.0)	20.0 (20.0-20.0)			
12.5	75	8.40-8.49	327 (313-340)	8.0 (8.0-8.0)	20.0 (20.0-20.0)			
25	65	8.41-8.50	327 (312-341)	8.1 (8.0-8.1)	20.0 (20.0-20.0)			
50	95	8.46-8.49	328 (314-342)	8.1 (8.0-8.1)	20.0 (20.0-20.0)			
100	85	8.52-8.66	316 (303-328)	8.1 (8.0-8.2)	20.0 (20.0-20.0)	146	134	14.3

**SURFACE WATER SAMPLE ARRIVAL INFORMATION**

<b>Collection Date/Time:</b>	6/8/95 @ 1600
<b>Use Date/Time:</b>	6/9/95 @ 1600
<b>Method of Shipment:</b>	Overnight Courier
<b>Temperature (°C):</b>	2.5
<b>pH:</b>	8.53
<b>Ammonia (mg/L):</b>	14.3
<b>Conductivity (umhos/cm):</b>	303
<b>DO (mg/L):</b>	8.3
<b>Description:</b>	Clear

**TEST SUMMARY: SC-EE05-TX-201**  
***Pimephales promelas* Chronic Renewal**

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Test protocol:	WCC SOP 510.1
Test organism:	<i>Pimephales promelas</i>
Source:	Environmental Consulting & Testing
Age of test organism:	<24 hours
Test initiation:	6/12/95 @ 1700
Test termination:	6/19/95 @ 1330
Temperature:	25 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	500 mL plastic beaker
Test volume:	250 mL
Organisms/replicate:	10
Replicates/concentration:	4
Feeding regime:	0.1 mL brine shrimp nauplii twice daily
Aeration during test:	none
Dilution Water:	Spring Water
Test duration:	7 days
Effect measured:	Survival and growth
Toxicity test methods and procedures were followed in accordance with EPA 600/4-89/001	
Reference Toxicant Data:	
NOEC (g/L NaCl):	3.0

---

**TEST RESULTS : SC- EE05-TX-201**  
***Pimephales promelas* Chronic Survival and Growth Test**

**Survival NOEC:**

Statistical analysis method:	100%
Normality test:	Steel's Many-One Rank Test
Homogeneity of variance test:	Shapiro-Wilk's - Pass

**Growth NOEC:**

Statistical analysis method:	100%
Normality test:	Dunnett's
Homogeneity of variance test:	Chi-square - Pass

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Control	100	7.59-8.48	373 (287-459)	7.5 (6.5-8.5)	24.5 (24.0-25.0)
6.25	95	7.78-8.43	323 (282-363)	7.5 (6.5-8.5)	24.5 (24.0-25.0)
12.5	95	7.94-8.45	332 (312-352)	7.6 (6.5-8.6)	24.5 (24.0-25.0)
25	100	7.91-8.47	319 (291-347)	7.5 (6.3-8.6)	24.5 (24.0-25.0)
50	90	7.92-8.50	324 (300-348)	7.4 (6.2-8.5)	24.5 (24.0-25.0)
100	95	7.91-8.76	303 (272-333)	7.6 (6.0-9.2)	24.5 (24.0-25.0)

Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )	Ammonia (mg/L)
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Control	120	
EE05	146	134

**TEST SUMMARY: SC-EE06-TX-201**  
***Ceriodaphnia dubia* 48-Hour Static Acute**

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Test protocol:	WCC SOP 401.2
Test organism:	<i>Ceriodaphnia dubia</i>
Source:	WCC Culture Laboratory
Age of test organism:	<24 hours
Test initiation:	6/9/95
Test termination:	6/11/95
Temperature:	25 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	30 mL styrene
Test volume:	20 mL
Organisms/replicate:	5
Replicates/concentration:	4
Feeding regime:	none
Aeration during test:	none
Dilution Water:	Hard Reconstituted Synthetic
Test duration:	48 hours
Effect measured:	Mortality
Reference Toxicant Data:	
LC <sub>50</sub> (g/L NaCl):	1.51

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**TEST RESULTS: SC-EE06-TX-201**  
***Ceriodaphnia dubia* 48-Hour Static Acute**

LC<sub>50</sub>> 100%

Statistical analysis method: N/A

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )
Control	100	8.49-8.50	604 (546-662)	8.4 (8.2-8.6)	24.6 (24.6-24.6)	250	
6.25	100	7.56-8.50	673 (622-724)	8.7 (8.7-8.7)	24.6 (24.6-24.6)		
12.5	95	8.38-8.49	689 (684-694)	8.5 (8.3-8.7)	24.6 (24.6-24.6)		
25	100	8.39-8.50	663 (643-683)	8.4 (8.2-8.6)	24.6 (24.6-24.6)		
50	100	8.29-8.51	582 (550-614)	8.5 (8.3-8.6)	24.6 (24.6-24.6)		
100	100	8.16-8.56	529 (522-536)	8.4 (8.2-8.6)	24.6 (24.6-24.6)	258	150

**SURFACE WATER SAMPLE ARRIVAL INFORMATION**

<b>Collection Date/Time:</b>	6/8/95 @ 1230
<b>Use Date/Time:</b>	6/9/95 @ 1310
<b>Method of Shipment:</b>	Overnight Courier
<b>Temperature (°C):</b>	2.0
<b>pH:</b>	7.77
<b>Ammonia (mg/L):</b>	1.94
<b>Conductivity (umhos/cm):</b>	536
<b>DO (mg/L):</b>	8.3

**TEST SUMMARY: SC-EE06-TX-201**  
***Ceriodaphnia dubia* Chronic Renewal**

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Test protocol:	WCC SOP 501.1
Test organism:	<i>Ceriodaphnia dubia</i>
Source:	WCC Culture Laboratory
WCC Batch:	6/12/95
Age of test organism:	<24 hours
Test initiation:	6/12/95
Test termination:	6/19/95
Temperature:	25 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	30 mL styrene
Test volume:	15 mL
Organisms/replicate:	1
Replicates/concentration:	10
Feeding regime:	0.05 mL <i>Selenastrum</i> and 0.05 mL YTC daily
Aeration during test:	none
Dilution Water:	Hard Reconstituted Synthetic
Test duration:	7 days
Effect measured:	Survival and reproduction
Toxicity test methods and procedures were followed in accordance with EPA 600/4-89/001	
Reference Toxicant Data:	
NOEC (g/L NaCl):	0.75

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**TEST RESULTS: SC-EE06-TX-201**  
***Ceriodaphnia dubia* Chronic Survival and Reproduction Test**

**Survival NOEC:**

Statistical analysis method:	100%
Normality test:	Fishers Exact
Homogeneity of variance test:	

**Reproduction NOEC:**

Statistical analysis method:	100%
Normality test:	Dunnetts
Homogeneity of variance test:	Pass

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Control	90	7.81-8.64	707 (437-791)	8.1 (7.1-8.5)	24.5 (24.0-25.0)
6.25	90	8.14-8.61	653 (550-717)	8.1 (7.4-8.6)	24.5 (24.0-25.0)
12.5	80	8.16-8.62	665 (519-723)	8.1 (7.4-8.6)	24.5 (24.0-25.0)
25	90	8.91-8.60	689 (527-702)	8.1 (7.5-8.6)	24.5 (24.0-25.0)
50	100	8.19-8.59	613 (520-656)	8.1 (7.4-8.6)	24.5 (24.0-25.0)
100	80	8.22-8.61	541 (441-580)	8.2 (7.5-8.6)	24.5 (24.0-25.0)

Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )	Ammonia (mg/L)
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Control	250	
EE06	258	150

**TEST SUMMARY: SC-EE06-TX-201**  
***Pimephales promelas* 48-Hour Static Acute**

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Test protocol:	WCC SOP 410.2
Test organism:	<i>Pimephales promelas</i>
Source:	Woodward-Clyde Consultants
Age of test organism:	6 days
Test initiation:	6/9/95
Test termination:	6/11/95
Temperature:	20 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	500 mL plastic beaker
Test volume:	250 mL
Organisms/replicate:	10
Replicates/concentration:	2
Feeding regime:	none
Aeration during test:	none
Dilution Water:	Spring Water
Test duration:	48 hours
Effect measured:	Mortality
Reference Toxicant Data:	
LC <sub>50</sub> (g/L NaCl):	5.26

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**TEST RESULTS: SC-EE06-TX-201**  
***Pimephales promelas* 48-Hour Static Acute**

LC<sub>50</sub> > 100%

Statistical analysis method: N/A

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )
Control	95	8.25-8.28	342 (317-366)	8.0 (7.9-8.1)	20.0 (20.0-20.0)	158	146
6.25	100	8.14-8.19	351 (342-359)	8.1 (8.1-8.1)	20.0 (20.0-20.0)		
12.5	95	8.42-8.43	364 (352-376)	8.1 (8.0-8.1)	20.0 (20.0-20.0)		
25	85	8.42-8.47	386 (370-401)	8.1 (8.0-8.1)	20.0 (20.0-20.0)		
50	95	8.37-8.48	439 (422-456)	8.1 (8.0-8.1)	20.0 (20.0-20.0)		
100	90	8.26-8.48	550 (531-569)	8.1 (8.0-8.1)	20.0 (20.0-20.0)	258	150

**SURFACE WATER SAMPLE ARRIVAL INFORMATION**

<b>Collection Date/Time:</b>	6/8/95 @ 1230
<b>Use Date/Time:</b>	6/9/95 @ 1600
<b>Method of Shipment:</b>	Overnight Courier
<b>Temperature (°C):</b>	2.0
<b>pH:</b>	7.77
<b>Ammonia (mg/L):</b>	1.94
<b>Conductivity (umhos/cm):</b>	531
<b>DO (mg/L):</b>	8.3
<b>Description:</b>	Clear

**TEST SUMMARY: SC-EE06-TX-201**  
***Pimephales promelas* Chronic Renewal**

---

Test protocol:	WCC SOP 510.1
Test organism:	<i>Pimephales promelas</i>
Source:	Environmental Consulting & Testing
Age of test organism:	<24 hours
Test initiation:	6/12/95 @ 1730
Test termination:	6/19/95 @ 1500
Temperature:	25 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	500 mL plastic beaker
Test volume:	250 mL
Organisms/replicate:	10
Replicates/concentration:	4
Feeding regime:	0.1 mL brine shrimp nauplii twice daily
Aeration during test:	none
Dilution Water:	Spring Water
Test duration:	7 days
Effect measured:	Survival and growth
Toxicity test methods and procedures were followed in accordance with EPA 600/4-89/001	
Reference Toxicant Data:	
NOEC (g/L NaCl):	3.0

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**TEST RESULTS : SC- EE06-TX-201**  
***Pimephales promelas* Chronic Survival and Growth Test**

<b>Survival NOEC:</b>	100%
Statistical analysis method:	Steel's Many-One Rank Test
Normality test:	Fail
Homogeneity of variance test:	Fail
<b>Growth NOEC:</b>	100%
Statistical analysis method:	Dunnett's
Normality test:	Pass
Homogeneity of variance test:	Pass

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Control	100	7.59-8.48	373 (287-459)	7.5 (6.5-8.5)	24.5 (24.0-25.0)
6.25	90	7.94-8.48	340 (284-371)	7.6 (6.3-8.5)	24.5 (24.0-25.0)
12.5	97.5	7.88-8.46	360 (312-352)	7.6 (6.0-8.4)	24.5 (24.0-25.0)
25	97.5	7.91-8.46	353 (317-416)	7.5 (6.0-8.4)	24.5 (24.0-25.0)
50	100	7.95-8.50	439 (382-528)	7.6 (6.1-8.4)	24.5 (24.0-25.0)
100	92.5	7.94-8.54	536 (520-565)	7.5 (6.2-8.4)	24.5 (24.0-25.0)

	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )	Ammonia (mg/L)
Control	158	146	
EE06	258	150	1.94

**TEST SUMMARY: SC-EE07-TX-201**  
***Ceriodaphnia dubia* 48-Hour Static Acute**

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Test protocol:	WCC SOP 401.2
Test organism:	<i>Ceriodaphnia dubia</i>
Source:	WCC Culture Laboratory
Age of test organism:	<24 hours
Test initiation:	6/9/95
Test termination:	6/11/95
Temperature:	25 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	30 mL styrene
Test volume:	20 mL
Organisms/replicate:	5
Replicates/concentration:	4
Feeding regime:	none
Aeration during test:	none
Dilution Water:	Hard Reconstituted Synthetic
Test duration:	48 hours
Effect measured:	Mortality
Reference Toxicant Data:	
LC <sub>50</sub> (g/L NaCl):	1.51

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**TEST RESULTS: SC-EE07-TX-201**  
***Ceriodaphnia dubia* 48-Hour Static Acute**

LC<sub>50</sub> > 100%

Statistical analysis method: N/A

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )
Control	100	8.49-8.50	604 (546-662)	8.4 (8.2-8.6)	24.6 (24.6-24.6)	250	
6.25	100	8.49-8.52	556 (439-672)	8.6 (8.4-8.8)	24.6 (24.6-24.6)		
12.5	100	8.48-8.50	682 (675-688)	8.6 (8.4-8.8)	24.6 (24.6-24.6)		
25	100	8.43-8.52	587 (586-588)	8.6 (8.4-8.7)	24.6 (24.6-24.6)		
50	100	8.35-8.52	644 (625-663)	8.5 (8.4-8.6)	24.6 (24.6-24.6)		
100	100	8.20-8.54	496 (423-568)	8.5 (8.4-8.5)	24.6 (24.6-24.6)	260	148

**SURFACE WATER SAMPLE ARRIVAL INFORMATION**

<b>Collection Date/Time:</b>	6/8/95 @ 0945
<b>Use Date/Time:</b>	6/9/95 @ 1310
<b>Method of Shipment:</b>	Overnight Courier
<b>Temperature (°C):</b>	2.0
<b>pH:</b>	7.78
<b>Ammonia (mg/L):</b>	0.771
<b>Conductivity (umhos/cm):</b>	568
<b>DO (mg/L):</b>	8.2

**TEST SUMMARY: SC-EE07-TX-201**  
***Ceriodaphnia dubia* Chronic Renewal**

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Test protocol:	WCC SOP 501.1
Test organism:	<i>Ceriodaphnia dubia</i>
Source:	WCC Culture Laboratory
WCC Batch:	6/12/95
Age of test organism:	<24 hours
Test initiation:	6/12/95
Test termination:	6/19/95
Temperature:	25 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	30 mL styrene
Test volume:	15 mL
Organisms/replicate:	1
Replicates/concentration:	10
Feeding regime:	0.05 mL <i>Selenastrum</i> and 0.05 mL YTC daily
Aeration during test:	none
Dilution Water:	Hard Reconstituted Synthetic
Test duration:	7 days
Effect measured:	Survival and reproduction
Toxicity test methods and procedures were followed in accordance with EPA 600/4-89/001	
Reference Toxicant Data:	
NOEC (g/L NaCl):	0.75

---

**TEST RESULTS: SC-EE07-TX-201**  
***Ceriodaphnia dubia* Chronic Survival and Reproduction Test**

**Survival NOEC:**

Statistical analysis method:	Steel's Many-One Rank
Normality test:	Fail
Homogeneity of variance test:	Fail

**Reproduction NOEC:**

Statistical analysis method:	Dunnett's
Normality test:	Pass
Homogeneity of variance test:	Pass

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Control	90	7.81-8.64	707 (437-791)	8.1 (7.1-8.5)	24.5 (24.0-25.0)
6.25	80	8.17-8.61	696 (540-772)	8 (7.1-8.5)	24.5 (24.0-25.0)
12.5	70	8.18-8.62	696 (644-768)	8 (7.2-8.5)	24.5 (24.0-25.0)
25	80	8.18-8.61	671 (544-769)	8.1 (7.2-8.5)	24.5 (24.0-25.0)
50	90	7.78-8.57	636 (609-858)	8.1 (7.2-8.5)	24.5 (24.0-25.0)
100	100	8.18-8.53	571 (507-615)	8.1 (7.2-8.7)	24.5 (24.0-25.0)

Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )	Ammonia (mg/L)
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Control	250	
EE07	260	148

**TEST SUMMARY: SC-EE07-TX-201**  
***Pimephales promelas* 48-Hour Static Acute**

---

Test protocol:	WCC SOP 410.2
Test organism:	<i>Pimephales promelas</i>
Source:	Woodward-Clyde Consultants
Age of test organism:	6 days
Test initiation:	6/9/95
Test termination:	6/11/95
Temperature:	20 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	500 mL plastic beaker
Test volume:	250 mL
Organisms/replicate:	10
Replicates/concentration:	2
Feeding regime:	none
Aeration during test:	none
Dilution Water:	Spring Water
Test duration:	48 hours
Effect measured:	Mortality
Reference Toxicant Data:	
LC <sub>50</sub> (g/L NaCl):	5.26

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**TEST RESULTS: SC-EE07-TX-201**  
***Pimephales promelas* 48-Hour Static Acute**

LC<sub>50</sub> > 100%

Statistical analysis method: N/A

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )
Control	95	8.25-8.28	342 (317-366)	8.0 (7.9-8.1)	21.0 (20.0-21.0)	158	146
6.25	95	8.33-8.47	351 (333-369)	8.1 (8.1-8.1)	21.0 (20.0-21.0)		
12.5	100	8.43-8.46	366 (349-382)	8.1 (8.0-8.1)	21.0 (20.0-21.0)		
25	90	8.45-8.48	392 (372-412)	8.1 (8.0-8.1)	21.0 (20.0-21.0)		
50	85	8.41-8.51	462 (444-479)	8.1 (8.0-8.1)	21.0 (20.0-21.0)		
100	85	8.35-8.51	544 (523-565)	8.1 (8.0-8.1)	21.0 (20.0-21.0)	260	148

**SURFACE WATER SAMPLE ARRIVAL INFORMATION**

<b>Collection Date/Time:</b>	6/8/95 @ 0945
<b>Use Date/Time:</b>	6/9/95 @ 1600
<b>Method of Shipment:</b>	Overnight Courier
<b>Temperature (°C):</b>	2.0
<b>pH:</b>	7.78
<b>Ammonia (mg/L):</b>	0.771
<b>Conductivity (umhos/cm):</b>	568
<b>DO (mg/L):</b>	8.2
<b>Description:</b>	Clear

**TEST SUMMARY: SC-EE07-TX-201**  
***Pimephales promelas* Chronic Renewal**

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Test protocol:	WCC SOP 510.1
Test organism:	<i>Pimephales promelas</i>
Source:	Environmental Consulting & Testing
Age of test organism:	<24 hours
Test initiation:	6/12/95 @ 1745
Test termination:	6/19/95 @ 1600
Temperature:	25 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	500 mL plastic beaker
Test volume:	250 mL
Organisms/replicate:	10
Replicates/concentration:	4
Feeding regime:	0.1 mL brine shrimp nauplii twice daily
Aeration during test:	none
Dilution Water:	Spring Water
Test duration:	7 days
Effect measured:	Survival and growth
Toxicity test methods and procedures were followed in accordance with EPA 600/4-89/001	
Reference Toxicant Data:	
NOEC (g/L NaCl):	3.0

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**TEST RESULTS : SC- EE07-TX-201**  
***Pimephales promelas* Chronic Survival and Growth Test**

**Survival NOEC:** 100%  
 Statistical analysis method: Fishers Exact  
 Normality test:  
 Homogeneity of variance test:

**Growth NOEC:** 100%  
 Statistical analysis method: Dunnett's  
 Normality test: Pass  
 Homogeneity of variance test: Pass

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Control	100	7.59-8.48	373 (287-459)	7.5 (6.5-8.5)	24.5 (24.0-25.0)
6.25	100	7.92-8.47	364 (334-383)	7.7 (7.0-8.4)	24.5 (24.0-25.0)
12.5	100	7.93-8.48	367 (349-382)	7.7 (6.8-8.4)	24.5 (24.0-25.0)
25	97.5	7.96-8.46	388 (338-410)	7.7 (6.8-8.4)	24.5 (24.0-25.0)
50	97.5	7.98-8.48	450 (385-478)	7.7 (6.8-8.4)	24.5 (24.0-25.0)
100	97.5	8.04-8.48	566 (533-597)	7.8 (6.8-8.4)	24.5 (24.0-25.0)

	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )	Ammonia (mg/L)
Control	158	146	
EE07	260	148	0.771

**TEST SUMMARY: SC-EE08-TX-201**  
***Ceriodaphnia dubia* 48-Hour Static Acute**

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Test protocol:	WCC SOP 401.2
Test organism:	<i>Ceriodaphnia dubia</i>
Source:	WCC Culture Laboratory
Age of test organism:	<24 hours
Test initiation:	6/9/95
Test termination:	6/11/95
Temperature:	25 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	30 mL styrene
Test volume:	20 mL
Organisms/replicate:	5
Replicates/concentration:	4
Feeding regime:	none
Aeration during test:	none
Dilution Water:	Hard Reconstituted Synthetic
Test duration:	48 hours
Effect measured:	Mortality
Reference Toxicant Data:	
LC <sub>50</sub> (g/L NaCl):	1.51

---

**TEST RESULTS: SC-EE08-TX-201**  
***Ceriodaphnia dubia* 48-Hour Static Acute**

LC<sub>50</sub> 24.79%

Statistical analysis method: Spearman-Karber

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )
Control	100	8.49-8.50	604 (546-662)	8.4 (8.2-8.6)	24.6 (24.6-24.6)	250	
6.25	75	8.47-8.51	634 (580-687)	8.6 (8.2-8.9)	24.6 (24.6-24.6)		
12.5	90	8.46-8.52	697 (656-738)	8.6 (8.2-8.9)	24.6 (24.6-24.6)		
25	15	8.41-8.52	682 (712-652)	8.5 (8.3-8.7)	24.6 (24.6-24.6)		
50	60	8.31-8.56	744 (726-761)	8.5 (8.3-8.6)	24.6 (24.6-24.6)		
100	30	8.16-8.59	838 (843-832)	8.4 (8.1-8.6)	24.6 (24.6-24.6)	260	148

**SURFACE WATER SAMPLE ARRIVAL INFORMATION**

<b>Collection Date/Time:</b>	6/8/95 @ 0730
<b>Use Date/Time:</b>	6/9/95 @ 1310
<b>Method of Shipment:</b>	Overnight Courier
<b>Temperature (°C):</b>	0.5
<b>pH:</b>	7.82
<b>Ammonia (mg/L):</b>	3.88
<b>Conductivity (umhos/cm):</b>	843
<b>DO (mg/L):</b>	8.5

**TEST SUMMARY: SC-EE08-TX-201**  
***Ceriodaphnia dubia* Chronic Renewal**

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Test protocol:	WCC SOP 501.1
Test organism:	<i>Ceriodaphnia dubia</i>
Source:	WCC Culture Laboratory
WCC Batch:	6/12/95
Age of test organism:	<24 hours
Test initiation:	6/12/95
Test termination:	6/19/95
Temperature:	25 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	30 mL styrene
Test volume:	15 mL
Organisms/replicate:	1
Replicates/concentration:	10
Feeding regime:	0.05 mL <i>Selenastrum</i> and 0.05 mL YTC daily
Aeration during test:	none
Dilution Water:	Hard Reconstituted Synthetic
Test duration:	7 days
Effect measured:	Survival and reproduction
Toxicity test methods and procedures were followed in accordance with EPA 600/4-89/001	
Reference Toxicant Data:	
NOEC (g/L NaCl):	0.75

---

**TEST RESULTS: SC-EE08-TX-201**  
***Ceriodaphnia dubia* Chronic Survival and Reproduction Test**

**Survival NOEC:**

Statistical analysis method:	50%
Normality test:	Steel's Many-One Rank
Homogeneity of variance test:	Fail

**Reproduction NOEC:**

Statistical analysis method:	Dunnett's
Normality test:	Pass
Homogeneity of variance test:	Pass

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Control	90	7.81-8.64	707 (437-791)	8.1 (7.1-8.5)	24.5 (24.0-25.0)
6.25	100	7.71-8.63	682 (426-747)	8.1 (7.0-8.7)	24.5 (24.0-25.0)
12.5	80	8.20-8.62	736 (650-779)	8 (7.2-8.6)	24.5 (24.0-25.0)
25	100	8.19-8.59	741 (577-827)	8 (7.2-8.6)	24.5 (24.0-25.0)
50	70	8.25-8.56	796 (662-861)	8 (7.3-8.7)	24.5 (24.0-25.0)
100	0	8.20-8.56	863 (602-968)	8.1 (7.5-8.8)	24.5 (24.0-25.0)

Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )	Ammonia (mg/L)
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Control	250		
EE08	250	174	3.88

**TEST SUMMARY: SC-EE08-TX-201**  
***Pimephales promelas* 48-Hour Static Acute**

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Test protocol:	WCC SOP 410.2
Test organism:	<i>Pimephales promelas</i>
Source:	Woodward-Clyde Consultants
Age of test organism:	6 days
Test initiation:	6/9/95
Test termination:	6/11/95
Temperature:	20 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	500 mL plastic beaker
Test volume:	250 mL
Organisms/replicate:	10
Replicates/concentration:	2
Feeding regime:	none
Aeration during test:	none
Dilution Water:	Spring Water
Test duration:	48 hours
Effect measured:	Mortality
Reference Toxicant Data:	
LC <sub>50</sub> (g/L NaCl):	5.26

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**TEST RESULTS: SC-EE08-TX-201**  
***Pimephales promelas* 48-Hour Static Acute**

LC<sub>50</sub> > 100%

Statistical analysis method: N/A

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )
Control	95	8.25-8.28	342 (317-366)	8.0 (7.9-8.1)	21.0 (20.0-21.0)	158	146
6.25	100	8.21-8.43	378 (364-391)	8.1 (8.0-8.1)	21.0 (20.0-21.0)		
12.5	95	8.42-8.46	408 (395-421)	8.1 (8.0-8.1)	21.0 (20.0-21.0)		
25	70	8.42-8.47	477 (465-488)	8.1 (8.1-8.1)	21.0 (20.0-21.0)		
50	95	8.36-8.50	626 (609-643)	8.1 (8.0-8.1)	21.0 (20.0-21.0)		
100	75	8.28-8.55	809 (715-902)	8.2 (8.1-8.2)	21.0 (20.0-21.0)	250	174

**SURFACE WATER SAMPLE ARRIVAL INFORMATION**

<b>Collection Date/Time:</b>	6/8/95 @ 0730
<b>Use Date/Time:</b>	6/9/95 @ 1600
<b>Method of Shipment:</b>	Overnight Courier
<b>Temperature (°C):</b>	0.5
<b>pH:</b>	7.82
<b>Ammonia (mg/L):</b>	3.88
<b>Conductivity (umhos/cm):</b>	843
<b>DO (mg/L):</b>	8.5
<b>Description:</b>	Clear

**TEST SUMMARY: SC-EE08-TX-201**  
***Pimephales promelas* Chronic Renewal**

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Test protocol:	WCC SOP 510.1
Test organism:	<i>Pimephales promelas</i>
Source:	Environmental Consulting & Testing
Age of test organism:	<24 hours
Test initiation:	6/12/95 @ 1800
Test termination:	6/19/95 @ 1630
Temperature:	25 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	500 mL plastic beaker
Test volume:	250 mL
Organisms/replicate:	10
Replicates/concentration:	4
Feeding regime:	0.1 mL brine shrimp nauplii twice daily
Aeration during test:	none
Dilution Water:	Spring Water
Test duration:	7 days
Effect measured:	Survival and growth
Toxicity test methods and procedures were followed in accordance with EPA 600/4-89/001	
Reference Toxicant Data:	
NOEC (g/L NaCl):	3.0

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**TEST RESULTS : SC- EE08-TX-201**  
***Pimephales promelas* Chronic Survival and Growth Test**

**Survival NOEC:**

Statistical analysis method:	Steel's Many-One Rank
Normality test:	Pass
Homogeneity of variance test:	Fail

**Growth NOEC:**

Statistical analysis method:	Dunnett's
Normality test:	Pass
Homogeneity of variance test:	Pass

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Control	100	7.59-8.48	373 (287-459)	7.5 (6.5-8.5)	24.5 (24.0-25.0)
6.25	97.5	7.72-8.46	397 (365-491)	7.7 (6.7-8.5)	24.5 (24.0-25.0)
12.5	97.5	7.66-8.46	408 (285-520)	7.7 (6.7-8.4)	24.5 (24.0-25.0)
25	75	7.99-8.47	477 (440-500)	7.6 (6.7-8.5)	24.5 (24.0-25.0)
50	70	8.01-8.47	625 (598-652)	7.7 (6.8-8.5)	24.5 (24.0-25.0)
100	90	8.10-8.46	893 (754-956)	7.8 (6.8-8.6)	24.5 (24.0-25.0)

Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )	Ammonia (mg/L)
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Control	158	146
EE08	250	174      3.88

**TEST SUMMARY: SC-EE09-TX-201**  
***Ceriodaphnia dubia* 48-Hour Static Acute**

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Test protocol:	WCC SOP 401.2
Test organism:	<i>Ceriodaphnia dubia</i>
Source:	WCC Culture Laboratory
Age of test organism:	<24 hours
Test initiation:	6/8/95
Test termination:	6/10/95
Temperature:	25 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	30 mL styrene
Test volume:	20 mL
Organisms/replicate:	5
Replicates/concentration:	4
Feeding regime:	none
Aeration during test:	none
Dilution Water:	Hard Reconstituted Synthetic
Test duration:	48 hours
Effect measured:	Mortality
Reference Toxicant Data:	
LC <sub>50</sub> (g/L NaCl):	1.51

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**TEST RESULTS: SC-EE09-TX-201**  
***Ceriodaphnia dubia* 48-Hour Static Acute**

LC<sub>50</sub>>100%

Statistical analysis method: N/A

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )
Control	100	8.51-8.54	645 (643-646)	8.4 (8.1-8.6)	24.7 (24.5-24.8)	250	
6.25	100	8.38-8.50	664 (623-705)	8.4 (8.1-8.6)	24.7 (24.5-24.8)		
12.5	100	8.41-8.51	595 (461-728)	8.4 (8.2-8.6)	24.7 (24.5-24.8)		
25	95	8.39-8.53	735 (706-764)	8.5 (8.2-8.7)	24.7 (24.5-24.8)		
50	80	8.31-8.55	801 (759-843)	8.5 (8.2-8.7)	24.7 (24.5-24.8)		
100	65	8.16-8.57	907 (824-989)	8.4 (8.0-8.7)	24.7 (24.5-24.8)	250	178

**SURFACE WATER SAMPLE ARRIVAL INFORMATION**

<b>Collection Date/Time:</b>	6/7/95 @ 1515
<b>Use Date/Time:</b>	6/8/95 @ 1500
<b>Method of Shipment:</b>	Overnight Courier
<b>Temperature (°C):</b>	1.0
<b>pH:</b>	7.78
<b>Ammonia (mg/L):</b>	17.6
<b>Conductivity (umhos/cm):</b>	989
<b>DO (mg/L):</b>	8.6

**TEST SUMMARY: SC-EE09-TX-201**  
***Ceriodaphnia dubia* Chronic Renewal**

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Test protocol:	WCC SOP 501.1
Test organism:	<i>Ceriodaphnia dubia</i>
Source:	WCC Culture Laboratory
WCC Batch:	6/10/95
Age of test organism:	<24 hours
Test initiation:	6/10/95
Test termination:	6/17/95
Temperature:	25 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	30 mL styrene
Test volume:	15 mL
Organisms/replicate:	1
Replicates/concentration:	10
Feeding regime:	0.05 mL <i>Selenastrum</i> and 0.05 mL YTC daily
Aeration during test:	none
Dilution Water:	Hard Reconstituted Synthetic
Test duration:	7 days
Effect measured:	Survival and reproduction
Toxicity test methods and procedures were followed in accordance with EPA 600/4-89/001	
Reference Toxicant Data:	
NOEC (g/L NaCl):	0.75

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**TEST RESULTS: SC-EE09-TX-201**  
***Ceriodaphnia dubia* Chronic Survival and Reproduction Test**

**Survival NOEC:**

Statistical analysis method:	Steel's Many-One Rank
Normality test:	Fail
Homogeneity of variance test:	Fail

**Reproduction NOEC:**

Statistical analysis method:	Dunnett's
Normality test:	Pass
Homogeneity of variance test:	Pass

50%

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Control	100	7.81-8.64	692 (338-801)	8.1 (7.5-8.5)	24.5 (24.0-25.0)
6.25	80	7.30-8.53	664 (380-794)	8.1 (7.5-8.5)	24.5 (24.0-25.0)
12.5	90	8.05-8.52	703 (419-784)	8.1 (7.5-8.6)	24.5 (24.0-25.0)
25	70	8.09-8.52	754 (487-835)	8.1 (7.5-8.6)	24.5 (24.0-25.0)
50	90	8.19-8.57	812 (558-899)	8.1 (7.5-8.6)	24.5 (24.0-25.0)
100	40	8.12-8.61	968 (762-1074)	8.2 (7.4-8.8)	24.5 (24.0-25.0)

Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )	Ammonia (mg/L)
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Control	250	
EE09	250	178

**TEST SUMMARY: SC-EE09-TX-201**  
***Pimephales promelas* 48-Hour Static Acute**

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Test protocol:	WCC SOP 410.2
Test organism:	<i>Pimephales promelas</i>
Source:	Woodward-Clyde Consultants
Age of test organism:	6 days
Test initiation:	6/8/95
Test termination:	6/10/95
Temperature:	20 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	500 mL plastic beaker
Test volume:	250 mL
Organisms/replicate:	10
Replicates/concentration:	2
Feeding regime:	none
Aeration during test:	none
Dilution Water:	Spring Water
Test duration:	48 hours
Effect measured:	Mortality
Reference Toxicant Data:	
LC <sub>50</sub> (g/L NaCl):	5.26

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**TEST RESULTS: SC-EE09-TX-201**  
***Pimephales promelas* 48-Hour Static Acute**

$LC_{50} > 100\%$

Statistical analysis method: N/A

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )
Control	90	7.68-8.54	682 (643-720)	8.4 (8.2-8.6)	20.9 (20.4-21.3)	158	146
6.25	95	8.38-8.43	697 (689-705)	8.4 (8.2-8.6)	20.9 (20.4-21.3)		
12.5	100	8.41-8.51	701 (674-728)	8.4 (8.1-8.7)	20.9 (20.4-21.3)		
25	85	8.39-8.53	775 (764-785)	8.5 (8.2-8.7)	20.9 (20.4-21.3)		
50	90	8.31-8.53	852 (843-860)	8.5 (8.2-8.7)	20.9 (20.4-21.3)		
100	90	8.16-8.59	995 (989-1000)	8.4 (8.1-8.7)	20.9 (20.4-21.3)	250	174

**SURFACE WATER SAMPLE ARRIVAL INFORMATION**

<b>Collection Date/Time:</b>	6/7/95 @ 1515
<b>Use Date/Time:</b>	6/8/95 @ 1600
<b>Method of Shipment:</b>	Overnight Courier
<b>Temperature (°C):</b>	1.0
<b>pH:</b>	7.78
<b>Ammonia (mg/L):</b>	17.6
<b>Conductivity (umhos/cm):</b>	989
<b>DO (mg/L):</b>	8.6
<b>Description:</b>	Clear

**TEST SUMMARY: SC-EE09-TX-201**  
***Pimephales promelas* Chronic Renewal**

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Test protocol:	WCC SOP 510.1
Test organism:	<i>Pimephales promelas</i>
Source:	Environmental Consulting & Testing
Age of test organism:	<24 hours
Test initiation:	6/10/95 @ 1845
Test termination:	6/17/95 @ 1330
Temperature:	25 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	500 mL plastic beaker
Test volume:	250 mL
Organisms/replicate:	10
Replicates/concentration:	4
Feeding regime:	0.1 mL brine shrimp nauplii twice daily
Aeration during test:	none
Dilution Water:	Spring Water
Test duration:	7 days
Effect measured:	Survival and growth
Toxicity test methods and procedures were followed in accordance with EPA 600/4-89/001	
Reference Toxicant Data:	
NOEC (g/L NaCl):	3.0

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**TEST RESULTS : SC- EE09-TX-201**  
***Pimephales promelas* Chronic Survival and Growth Test**

<b>Survival NOEC:</b>	100%
Statistical analysis method:	Steel's Many-One Rank
Normality test:	Fail
Homogeneity of variance test:	Fail
<b>Growth NOEC:</b>	100%
Statistical analysis method:	Dunnett's
Normality test:	Pass
Homogeneity of variance test:	Pass

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Control	100	7.47-8.36	376 (325-459)	7.7 (7.0-8.5)	24.5 (24.0-25.0)
6.25	100	7.54-8.48	388 (333-447)	7.8 (7.0-8.5)	24.5 (24.0-25.0)
12.5	100	7.61-8.34	418 (394-456)	7.7 (7.0-8.5)	24.5 (24.0-25.0)
25	100	7.68-8.37	475 (280-597)	7.7 (6.9-8.6)	24.5 (24.0-25.0)
50	97.5	7.82-8.37	648 (550-769)	7.8 (6.9-8.5)	24.5 (24.0-25.0)
100	95	7.97-8.43	964 (789-1139)	8.0 (6.4-8.9)	24.5 (24.0-25.0)

	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )	Ammonia (mg/L)
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Control	158	146	
EE09	250	178	17.6

**TEST SUMMARY: SC-EE09-TX-201**  
***Ceriodaphnia dubia* 48-Hour Static Acute**

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Test protocol:	WCC SOP 401.2
Test organism:	<i>Ceriodaphnia dubia</i>
Source:	WCC Culture Laboratory
Age of test organism:	<24 hours
Test initiation:	6/8/95
Test termination:	6/10/95
Temperature:	25 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	30 mL styrene
Test volume:	20 mL
Organisms/replicate:	5
Replicates/concentration:	4
Feeding regime:	none
Aeration during test:	none
Dilution Water:	Hard Reconstituted Synthetic
Test duration:	48 hours
Effect measured:	Mortality
Reference Toxicant Data:	
LC <sub>50</sub> (g/L NaCl):	1.51

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**TEST RESULTS: SC-EE09-TX-201**  
***Ceriodaphnia dubia* 48-Hour Static Acute**

$LC_{50} > 100\%$

Statistical analysis method: N/A

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )
Control	100	8.51-8.54	645 (643-646)	8.4 (8.1-8.6)	24.7 (24.5-24.8)	250	
6.25	100	8.38-8.50	664 (623-705)	8.4 (8.1-8.6)	24.7 (24.5-24.8)		
12.5	100	8.41-8.51	595 (461-728)	8.4 (8.2-8.6)	24.7 (24.5-24.8)		
25	95	8.39-8.53	735 (706-764)	8.5 (8.2-8.7)	24.7 (24.5-24.8)		
50	80	8.31-8.55	801 (759-843)	8.5 (8.2-8.7)	24.7 (24.5-24.8)		
100	65	8.16-8.57	907 (824-989)	8.4 (8.0-8.7)	24.7 (24.5-24.8)	250	178

**SURFACE WATER SAMPLE ARRIVAL INFORMATION**

<b>Collection Date/Time:</b>	6/7/95 @ 1515
<b>Use Date/Time:</b>	6/8/95 @ 1500
<b>Method of Shipment:</b>	Overnight Courier
<b>Temperature (°C):</b>	1.0
<b>pH:</b>	7.78
<b>Ammonia (mg/L):</b>	17.6
<b>Conductivity (umhos/cm):</b>	989
<b>DO (mg/L):</b>	8.6

**TEST SUMMARY: SC-EE09-TX-201**  
***Ceriodaphnia dubia* Chronic Renewal**

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Test protocol:	WCC SOP 501.1
Test organism:	<i>Ceriodaphnia dubia</i>
Source:	WCC Culture Laboratory
WCC Batch:	6/10/95
Age of test organism:	<24 hours
Test initiation:	6/10/95
Test termination:	6/17/95
Temperature:	25 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	30 mL styrene
Test volume:	15 mL
Organisms/replicate:	1
Replicates/concentration:	10
Feeding regime:	0.05 mL <i>Selenastrum</i> and 0.05 mL YTC daily
Aeration during test:	none
Dilution Water:	Hard Reconstituted Synthetic
Test duration:	7 days
Effect measured:	Survival and reproduction
Toxicity test methods and procedures were followed in accordance with EPA 600/4-89/001	
Reference Toxicant Data:	
NOEC (g/L NaCl):	0.75

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**TEST RESULTS: SC-EE09-TX-201**  
***Ceriodaphnia dubia* Chronic Survival and Reproduction Test**

**Survival NOEC:**

Statistical analysis method:	Steel's Many-One Rank
Normality test:	Fail
Homogeneity of variance test:	Fail

**Reproduction NOEC:**

Statistical analysis method:	Dunnett's
Normality test:	Pass
Homogeneity of variance test:	Pass

50%

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Control	100	7.81-8.64	692 (338-801)	8.1 (7.5-8.5)	24.5 (24.0-25.0)
6.25	80	7.30-8.53	664 (380-794)	8.1 (7.5-8.5)	24.5 (24.0-25.0)
12.5	90	8.05-8.52	703 (419-784)	8.1 (7.5-8.6)	24.5 (24.0-25.0)
25	70	8.09-8.52	754 (487-835)	8.1 (7.5-8.6)	24.5 (24.0-25.0)
50	90	8.19-8.57	812 (558-899)	8.1 (7.5-8.6)	24.5 (24.0-25.0)
100	40	8.12-8.61	968 (762-1074)	8.2 (7.4-8.8)	24.5 (24.0-25.0)

	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )	Ammonia (mg/L)
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Control	250		
EE09	250	178	17.6

**TEST SUMMARY: SC-EE09-TX-201**  
***Pimephales promelas* 48-Hour Static Acute**

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Test protocol:	WCC SOP 410.2
Test organism:	<i>Pimephales promelas</i>
Source:	Woodward-Clyde Consultants
Age of test organism:	6 days
Test initiation:	6/8/95
Test termination:	6/10/95
Temperature:	20 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	500 mL plastic beaker
Test volume:	250 mL
Organisms/replicate:	10
Replicates/concentration:	2
Feeding regime:	none
Aeration during test:	none
Dilution Water:	Spring Water
Test duration:	48 hours
Effect measured:	Mortality
Reference Toxicant Data:	
LC <sub>50</sub> (g/L NaCl):	5.26

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**TEST RESULTS: SC-EE09-TX-201**  
***Pimephales promelas* 48-Hour Static Acute**

LC<sub>50</sub>> 100%

Statistical analysis method: N/A

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )
Control	90	7.68-8.54	682 (643-720)	8.4 (8.2-8.6)	20.9 (20.4-21.3)	158	146
6.25	95	8.38-8.43	697 (689-705)	8.4 (8.2-8.6)	20.9 (20.4-21.3)		
12.5	100	8.41-8.51	701 (674-728)	8.4 (8.1-8.7)	20.9 (20.4-21.3)		
25	85	8.39-8.53	775 (764-785)	8.5 (8.2-8.7)	20.9 (20.4-21.3)		
50	90	8.31-8.53	852 (843-860)	8.5 (8.2-8.7)	20.9 (20.4-21.3)		
100	90	8.16-8.59	995 (989-1000)	8.4 (8.1-8.7)	20.9 (20.4-21.3)	250	174

**SURFACE WATER SAMPLE ARRIVAL INFORMATION**

<b>Collection Date/Time:</b>	6/7/95 @ 1515
<b>Use Date/Time:</b>	6/8/95 @ 1600
<b>Method of Shipment:</b>	Overnight Courier
<b>Temperature (°C):</b>	1.0
<b>pH:</b>	7.78
<b>Ammonia (mg/L):</b>	17.6
<b>Conductivity (umhos/cm):</b>	989
<b>DO (mg/L):</b>	8.6
<b>Description:</b>	Clear

**TEST SUMMARY: SC-EE09-TX-201**  
***Pimephales promelas* Chronic Renewal**

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Test protocol:	WCC SOP 510.1
Test organism:	<i>Pimephales promelas</i>
Source:	Environmental Consulting & Testing
Age of test organism:	<24 hours
Test initiation:	6/10/95 @ 1845
Test termination:	6/17/95 @ 1330
Temperature:	25 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	500 mL plastic beaker
Test volume:	250 mL
Organisms/replicate:	10
Replicates/concentration:	4
Feeding regime:	0.1 mL brine shrimp nauplii twice daily
Aeration during test:	none
Dilution Water:	Spring Water
Test duration:	7 days
Effect measured:	Survival and growth
Toxicity test methods and procedures were followed in accordance with EPA 600/4-89/001	
Reference Toxicant Data:	
NOEC (g/L NaCl):	3.0

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**TEST RESULTS : SC- EE09-TX-201**  
***Pimephales promelas* Chronic Survival and Growth Test**

**Survival NOEC:**

Statistical analysis method:	100%
Normality test:	Steel's Many-One Rank
Homogeneity of variance test:	Fail

**Growth NOEC:**

Statistical analysis method:	100%
Normality test:	Dunnett's
Homogeneity of variance test:	Pass

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Control	100	7.47-8.36	376 (325-459)	7.7 (7.0-8.5)	24.5 (24.0-25.0)
6.25	100	7.54-8.48	388 (333-447)	7.8 (7.0-8.5)	24.5 (24.0-25.0)
12.5	100	7.61-8.34	418 (394-456)	7.7 (7.0-8.5)	24.5 (24.0-25.0)
25	100	7.68-8.37	475 (280-597)	7.7 (6.9-8.6)	24.5 (24.0-25.0)
50	97.5	7.82-8.37	648 (550-769)	7.8 (6.9-8.5)	24.5 (24.0-25.0)
100	95	7.97-8.43	964 (789-1139)	8.0 (6.4-8.9)	24.5 (24.0-25.0)

	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )	Ammonia (mg/L)
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Control	158	146	
EE09	250	178	17.6

**TEST SUMMARY: SC-EE10-TX-201**  
***Ceriodaphnia dubia* 48-Hour Static Acute**

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Test protocol:	WCC SOP 401.2
Test organism:	<i>Ceriodaphnia dubia</i>
Source:	WCC Culture Laboratory
Age of test organism:	<24 hours
Test initiation:	6/8/95
Test termination:	6/10/95
Temperature:	25 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	30 mL styrene
Test volume:	20 mL
Organisms/replicate:	5
Replicates/concentration:	4
Feeding regime:	none
Aeration during test:	none
Dilution Water:	Hard Reconstituted Synthetic
Test duration:	48 hours
Effect measured:	Mortality
Reference Toxicant Data:	
LC <sub>50</sub> (g/L NaCl):	1.51

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**TEST RESULTS: SC-EE10-TX-201**  
***Ceriodaphnia dubia* 48-Hour Static Acute**

LC<sub>50</sub>>100%

Statistical analysis method: N/A

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )
Control	100	8.51-8.54	645 (643-646)	8.4 (8.1-8.6)	24.7 (24.5-24.8)	250	
6.25	100	8.48-8.50	612 (514-710)	8.3 (7.9-8.6)	24.7 (24.5-24.8)		
12.5	95	8.47-8.49	754 (729-778)	8.3 (8.0-8.6)	24.7 (24.5-24.8)		
25	100	8.49-8.50	661 (624-697)	8.3 (8.0-8.5)	24.7 (24.5-24.8)		
50	100	8.27-8.53	756 (736-779)	8.5 (8.0-8.9)	24.7 (24.5-24.8)		
100	100	8.05-8.53	980 (945-1015)	8.5 (8.0-8.9)	24.7 (24.5-24.8)	240	186

**SURFACE WATER SAMPLE ARRIVAL INFORMATION**

<b>Collection Date/Time:</b>	6/7/95 @ 1400
<b>Use Date/Time:</b>	6/8/95 @ 1500
<b>Method of Shipment:</b>	Overnight Courier
<b>Temperature (°C):</b>	3.8
<b>pH:</b>	7.75
<b>Ammonia (mg/L):</b>	10
<b>Conductivity (umhos/cm):</b>	1015
<b>DO (mg/L):</b>	8.7

**TEST SUMMARY: SC-EE10-TX-201**  
***Ceriodaphnia dubia* Chronic Renewal**

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Test protocol:	WCC SOP 501.1
Test organism:	<i>Ceriodaphnia dubia</i>
Source:	WCC Culture Laboratory
WCC Batch:	6/10/95
Age of test organism:	<24 hours
Test initiation:	6/10/95
Test termination:	6/17/95
Temperature:	25 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	30 mL styrene
Test volume:	15 mL
Organisms/replicate:	1
Replicates/concentration:	10
Feeding regime:	0.05 mL <i>Selenastrum</i> and 0.05 mL YTC daily
Aeration during test:	none
Dilution Water:	Hard Reconstituted Synthetic
Test duration:	7 days
Effect measured:	Survival and reproduction
Toxicity test methods and procedures were followed in accordance with EPA 600/4-89/001	
Reference Toxicant Data:	
NOEC (g/L NaCl):	0.75

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**TEST RESULTS: SC-EE10-TX-201**  
***Ceriodaphnia dubia* Chronic Survival and Reproduction Test**

**Survival NOEC:**

Statistical analysis method:	Steel's Many-One Rank
Normality test:	Fail
Homogeneity of variance test:	Fail

**Reproduction NOEC:**

Statistical analysis method:	Steel's Many-One Rank
Normality test:	Pass
Homogeneity of variance test:	Fail

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Control	100	7.81-8.64	692 (338-801)	8.1 (7.5-8.5)	24.5 (24.0-25.0)
6.25	90	7.86-8.54	727 (620-844)	8.2 (7.6-8.6)	24.5 (24.0-25.0)
12.5	80	8.23-8.54	732 (583-796)	8.2 (7.6-8.6)	24.5 (24.0-25.0)
25	70	8.23-8.53	758 (403-834)	8.1 (7.6-8.5)	24.5 (24.0-25.0)
50	70	8.25-8.54	788 (688-916)	8.1 (7.5-8.6)	24.5 (24.0-25.0)
100	80	8.04-8.60	958 (817-1060)	8.3 (7.6-9.6)	24.5 (24.0-25.0)

Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )	Ammonia (mg/L)
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Control	250		
EE10	240	186	10

**TEST SUMMARY: SC-EE10-TX-201**  
***Pimephales promelas* 48-Hour Static Acute**

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Test protocol:	WCC SOP 410.2
Test organism:	<i>Pimephales promelas</i>
Source:	Woodward-Clyde Consultants
Age of test organism:	6 days
Test initiation:	6/8/95
Test termination:	6/10/95
Temperature:	20 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	500 mL plastic beaker
Test volume:	250 mL
Organisms/replicate:	10
Replicates/concentration:	2
Feeding regime:	none
Aeration during test:	none
Dilution Water:	Spring Water
Test duration:	48 hours
Effect measured:	Mortality
Reference Toxicant Data:	
LC <sub>50</sub> (g/L NaCl):	5.26

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**TEST RESULTS: SC-EE10-TX-201**  
***Pimephales promelas* 48-Hour Static Acute**

$LC_{50} > 100\%$

Statistical analysis method: N/A

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )
Control	90	7.68-8.54	682 (643-720)	8.4 (8.2-8.6)	20.9 (20.4-21.3)	158	146
6.25	95	8.48-8.50	687 (664-710)	8.4 (8.2-8.6)	20.9 (20.4-21.3)		
12.5	100	8.47-8.48	651 (572-729)	8.4 (8.2-8.6)	20.9 (20.4-21.3)		
25	95	8.49-8.50	751 (697-804)	8.4 (8.2-8.5)	20.9 (20.4-21.3)		
50	90	8.27-8.52	785 (779-791)	8.5 (8.1-8.9)	20.9 (20.4-21.3)		
100	80	8.05-8.57	1036 (1015-1057)	8.5 (8.1-8.9)	20.9 (20.4-21.3)	250	174

**SURFACE WATER SAMPLE ARRIVAL INFORMATION**

<b>Collection Date/Time:</b>	6/7/95 @ 1400
<b>Use Date/Time:</b>	6/8/95 @ 1430
<b>Method of Shipment:</b>	Overnight Courier
<b>Temperature (°C):</b>	3.8
<b>pH:</b>	7.75
<b>Ammonia (mg/L):</b>	10
<b>Conductivity (umhos/cm):</b>	1015
<b>DO (mg/L):</b>	8.7
<b>Description:</b>	Clear

**TEST SUMMARY: SC-EE10-TX-201**  
***Pimephales promelas* Chronic Renewal**

---

Test protocol:	WCC SOP 510.1
Test organism:	<i>Pimephales promelas</i>
Source:	Environmental Consulting & Testing
Age of test organism:	<24 hours
Test initiation:	6/10/95 @ 1845
Test termination:	6/17/95 @ 1130
Temperature:	25 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	500 mL plastic beaker
Test volume:	250 mL
Organisms/replicate:	10
Replicates/concentration:	4
Feeding regime:	0.1 mL brine shrimp nauplii twice daily
Aeration during test:	none
Dilution Water:	Spring Water
Test duration:	7 days
Effect measured:	Survival and growth
Toxicity test methods and procedures were followed in accordance with EPA 600/4-89/001	
Reference Toxicant Data:	
NOEC (g/L NaCl):	3.0

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**TEST RESULTS : SC- EE10-TX-201**  
***Pimephales promelas* Chronic Survival and Growth Test**

<b>Survival NOEC:</b>	50%
Statistical analysis method:	Steel's Many-One Rank
Normality test:	Pass
Homogeneity of variance test:	Fail
<b>Growth NOEC:</b>	100%
Statistical analysis method:	Dunnett's
Normality test:	Pass
Homogeneity of variance test:	Pass

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Control	100	7.47-8.36	376 (325-459)	7.7 (7.0-8.5)	24.5 (24.0-25.0)
6.25	100	7.36-8.36	414 (365-474)	7.7 (6.2-8.8)	24.5 (24.0-25.0)
12.5	95	7.56-8.37	417 (247-475)	7.7 (6.4-8.7)	24.5 (24.0-25.0)
25	100	7.65-8.40	503 (419-543)	7.6 (6.6-8.7)	24.5 (24.0-25.0)
50	87.5	7.77-8.35	668 (569-733)	7.7 (6.9-8.7)	24.5 (24.0-25.0)
100	85	7.92-8.40	994 (767-1096)	8.0 (6.6-9.6)	24.5 (24.0-25.0)

	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )	Ammonia (mg/L)
Control	158	146	
EE10	240	186	10

**TEST SUMMARY: SC-EW01-TX-201**  
***Ceriodaphnia dubia* 48-Hour Static Acute**

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Test protocol:	WCC SOP 401.2
Test organism:	<i>Ceriodaphnia dubia</i>
Source:	WCC Culture Laboratory
Age of test organism:	<24 hours
Test initiation:	6/14/95
Test termination:	6/16/95
Temperature:	25 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	30 mL styrene
Test volume:	20 mL
Organisms/replicate:	5
Replicates/concentration:	4
Feeding regime:	none
Aeration during test:	none
Dilution Water:	Hard Reconstituted Synthetic
Test duration:	48 hours
Effect measured:	Mortality
Reference Toxicant Data:	
LC <sub>50</sub> (g/L NaCl):	1.51

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**TEST RESULTS: SC-EW01-TX-201**  
***Ceriodaphnia dubia* 48-Hour Static Acute**

LC<sub>50</sub> > 100%

Statistical analysis method: N/A

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )
Control	100	7.71-8.20	425 (380-469)	8.4 (8.2-8.6)	24.0-25.0	140	
6.25	100	8.15-8.26	425 (414-436)	8.5 (8.3-8.6)	24.0-25.0		
12.5	100	8.05-8.28	414 (402-426)	8.5 (8.3-8.6)	24.0-25.0		
25	100	7.93-8.35	394 (380-408)	8.5 (8.4-8.6)	24.0-25.0		
50	100	7.85-8.39	371 (357-384)	8.4 (8.2-8.5)	24.0-25.0		
100	70	7.70-8.48	289 (241-336)	8.2 (8.1-8.3)	24.0-25.0	166	168

**SAMPLE ARRIVAL INFORMATION**

<b>Collection Date/Time:</b>	6/13/95 @ 1105
<b>Use Date/Time:</b>	6/14/95 @ 1400
<b>Method of Shipment:</b>	Overnight Courier
<b>Temperature (°C):</b>	1.5
<b>pH:</b>	7.94
<b>Ammonia (mg/L):</b>	16.4
<b>Conductivity (umhos/cm):</b>	241
<b>DO (mg/L):</b>	8.4

**TEST SUMMARY: SC-EW01-TX-201**  
***Ceriodaphnia dubia* Chronic Renewal**

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Test protocol:	WCC SOP 501.1
Test organism:	<i>Ceriodaphnia dubia</i>
Source:	WCC Culture Laboratory
WCC Batch:	6/17/95 to 6/18/95
Age of test organism:	<24 hours
Test initiation:	6/16/95
Test termination:	6/23/95
Temperature:	25 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	30 mL styrene
Test volume:	15 mL
Organisms/replicate:	1
Replicates/concentration:	10
Feeding regime:	0.05 mL <i>Selenastrum</i> and 0.05 mL YTC daily
Aeration during test:	none
Dilution Water:	Hard Reconstituted Synthetic
Test duration:	7 days
Effect measured:	Survival and reproduction
Toxicity test methods and procedures were followed in accordance with EPA 600/4-89/001	
Reference Toxicant Data:	
NOEC (g/L NaCl):	0.75

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**TEST RESULTS: SC-EW01-TX-201**  
***Ceriodaphnia dubia* Chronic Survival and Reproduction Test**

**Survival NOEC:**

Statistical analysis method:	Steel's Many-One Rank
Normality test:	Pass
Homogeneity of variance test:	Fail

**Reproduction NOEC:**

Statistical analysis method:	Dunnett's
Normality test:	Pass
Homogeneity of variance test:	Pass

25%

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Control	90	7.94-8.58	457 (422-516)	8.0 (7.4-8.5)	24.7 (24.0-25.2)
6.25	50	7.94-8.47	438 (419-468)	8 (7.3-8.5)	24.7 (24.0-25.2)
12.5	80	8.00-8.43	428 (410-452)	8.1 (7.4-8.6)	24.7 (24.0-25.2)
25	100	8.02-8.45	412 (398-431)	8.0 (7.2-8.6)	24.7 (24.0-25.2)
50	30	7.92-8.47	383 (365-400)	8.0 (7.3-8.5)	24.7 (24.0-25.2)
100	0	7.71-8.50	330 (320-337)	8.1 (7.2-8.5)	24.7 (24.0-25.2)

Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )	Ammonia (mg/L)
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Control	150	
EW01	166	168

**TEST SUMMARY: SC-EW01-TX-201**  
***Pimephales promelas* 48-Hour Static Acute**

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Test protocol:	WCC - 410.2
Test organism:	<i>Pimephales promelas</i>
Source:	Woodward-Clyde Consultants
Age of test organism:	13 days
Test initiation:	6/14/95
Test termination:	6/16/95
Temperature:	20 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	500 mL plastic beaker
Test volume:	250 mL
Organisms/replicate:	10
Replicates/concentration:	2
Feeding regime:	none
Aeration during test:	none
Dilution Water:	Hard Reconstituted Synthetic
Test duration:	48 hours
Effect measured:	Mortality
Reference Toxicant Data:	
LC <sub>50</sub> (g/L NaCl):	5.26

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**TEST RESULTS: SC-EW01-TX-201**  
***Pimephales promelas* 48-Hour Static Acute**

LC<sub>50</sub> > 100%

Statistical analysis method: N/A

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )
Control	100	8.29-8.31	340 (327-353)	7.9 (7.4-8.4)	20.9 (20.8-21.0)	158	146
6.25	100	8.04-8.34	339 (332-346)	7.8 (7.3-8.3)	20.9 (20.8-21.0)		
12.5	100	8.20-8.35	311 (277-345)	7.9 (7.3-8.4)	20.9 (20.8-21.0)		
25	100	8.18-8.39	330 (315-345)	7.9 (7.4-8.4)	20.9 (20.8-21.0)		
50	100	8.11-8.40	330 (314-346)	7.9 (7.4-8.4)	20.9 (20.8-21.0)		
100	100	7.94-8.42	332 (316-347)	8.0 (7.6-8.4)	20.9 (20.8-21.0)	166	168

**SURFACE WATER SAMPLE ARRIVAL INFORMATION**

<b>Collection Date/Time:</b>	6/13/95 @ 1105
<b>Use Date/Time:</b>	6/14/95 @ 1400
<b>Method of Shipment:</b>	Overnight Courier
<b>Temperature (°C):</b>	1.5
<b>pH:</b>	7.94
<b>Ammonia (mg/L):</b>	16.4
<b>Conductivity (umhos/cm):</b>	241
<b>DO (mg/L):</b>	8.4
<b>Description:</b>	Clear

**TEST SUMMARY: SC-EW01-TX-201**  
***Pimephales promelas* Chronic Renewal**

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Test protocol:	WCC SOP 510.1
Test organism:	<i>Pimephales promelas</i>
Source:	Environmental Consulting & Testing
Age of test organism:	<24 hours
Test initiation:	6/16/95 @ 1530
Test termination:	6/23/95 @ 1600
Temperature:	25 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	500 mL plastic beaker
Test volume:	250 mL
Organisms/replicate:	10
Replicates/concentration:	4
Feeding regime:	0.1 mL brine shrimp nauplii twice daily
Aeration during test:	none
Dilution Water:	Hard Reconstituted Synthetic
Test duration:	7 days
Effect measured:	Survival and growth
Toxicity test methods and procedures were followed in accordance with EPA 600/4-89/001	
Reference Toxicant Data:	
NOEC (g/L NaCl):	3

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**TEST RESULTS - SC-EW01-TX-201**  
***Pimephales promelas* Chronic Survival and Growth Test**

**Survival NOEC:** 100%  
 Statistical analysis method: Fishers Exact  
 Normality test:  
 Homogeneity of variance test:

**Growth NOEC:** 100%  
 Statistical analysis method: Dunnett's  
 Normality test: Pass  
 Homogeneity of variance test: Pass

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Control	100	7.86-8.50	346 (309-440)	7.8 (6.6-8.4)	24.7 (24.0-25.2)
6.25	100	7.98-8.61	341 (321-367)	7.7 (6.7-8.3)	24.7 (24.0-25.2)
12.5	100	7.92-8.55	332 (312-363)	7.6 (6.1-8.2)	24.7 (24.0-25.2)
25	100	7.92-8.51	330 (288-361)	7.5 (6.1-8.2)	24.7 (24.0-25.2)
50	100	7.78-8.48	332 (313-363)	7.6 (5.8-8.3)	24.7 (24.0-25.2)
100	97.5	7.69-8.57	332 (312-359)	7.5 (5.5-8.3)	24.7 (24.0-25.2)

	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )	Ammonia (mg/L)
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Control	150		
EW01	166	168	16.4

**TEST SUMMARY: SC-EW02-TX-201**  
***Ceriodaphnia dubia* 48-Hour Static Acute**

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Test protocol:	WCC SOP 401.2
Test organism:	<i>Ceriodaphnia dubia</i>
Source:	WCC Culture Laboratory
Age of test organism:	<24 hours
Test initiation:	6/14/95
Test termination:	6/16/95
Temperature:	25 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	30 mL styrene
Test volume:	20 mL
Organisms/replicate:	5
Replicates/concentration:	4
Feeding regime:	none
Aeration during test:	none
Dilution Water:	Hard Reconstituted Synthetic
Test duration:	48 hours
Effect measured:	Mortality
Reference Toxicant Data:	
LC <sub>50</sub> (g/L NaCl):	1.51

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**TEST RESULTS: SC-EW02-TX-201**  
***Ceriodaphnia dubia* 48-Hour Static Acute**

LC<sub>50</sub> > 100%

Statistical analysis method: N/A

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )
Control	100	8.40-8.63	738 (731-744)	8.5 (8.3-8.6)	24.5 (24.0-25.0)	270	
6.25	95	8.50-8.57	658 (608-708)	8.5 (8.3-8.6)	24.5 (24.0-25.0)		
12.5	95	8.52-8.55	737 (681-792)	8.5 (8.3-8.7)	24.5 (24.0-25.0)		
25	100	8.52-8.57	782 (768-795)	8.5 (8.3-8.7)	24.5 (24.0-25.0)		
50	100	8.40-8.66	700 (620-780)	8.7 (8.3-9.0)	24.5 (24.0-25.0)		
100	100	8.31-8.59	755 (728-781)	8.8 (8.3-9.2)	24.5 (24.0-25.0)	310	336

**SURFACE WATER SAMPLE ARRIVAL INFORMATION**

<b>Collection Date/Time:</b>	6/13/95 @ 0830
<b>Use Date/Time:</b>	6/14/95 @ 1420
<b>Method of Shipment:</b>	Overnight Courier
<b>Temperature (°C):</b>	1.5
<b>pH:</b>	8.32
<b>Ammonia (mg/L):</b>	0.85
<b>Conductivity (umhos/cm):</b>	781
<b>DO (mg/L):</b>	8.8

**TEST SUMMARY: SC-EW02-TX-201**  
***Ceriodaphnia dubia* Chronic Renewal**

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Test protocol:	WCC SOP 501.1
Test organism:	<i>Ceriodaphnia dubia</i>
Source:	WCC Culture Laboratory
WCC Batch:	6/16/95
Age of test organism:	<24 hours
Test initiation:	6/16/95
Test termination:	6/23/95
Temperature:	25 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	30 mL styrene
Test volume:	15 mL
Organisms/replicate:	1
Replicates/concentration:	10
Feeding regime:	0.05 mL <i>Selenastrum</i> and 0.05 mL YTC daily
Aeration during test:	none
Dilution Water:	Hard Reconstituted Synthetic
Test duration:	7 days
Effect measured:	Survival and reproduction
Toxicity test methods and procedures were followed in accordance with EPA 600/4-89/001	
Reference Toxicant Data:	
NOEC (g/L NaCl):	0.75

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**TEST RESULTS: SC-EW02-TX-201**  
***Ceriodaphnia dubia* Chronic Survival and Reproduction Test**

**Survival NOEC:**

Statistical analysis method:	100%
Normality test:	Wilcoxon Rank Sum with Bonferroni Adju
Homogeneity of variance test:	Fail

**Reproduction NOEC:**

Statistical analysis method:	100%
Normality test:	Dunnett's
Homogeneity of variance test:	Pass

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Control	100	8.30-8.71	861 (748-983)	7.9 (7.2-8.4)	24.6 (24.0-25.2)
6.25	80	8.30-8.73	845 (715-919)	8.0 (7.1-8.4)	24.6 (24.0-25.2)
12.5	70	8.32-8.72	851 (706-931)	8.0 (7.2-8.5)	24.6 (24.0-25.2)
25	70	8.37-8.71	842 (710-911)	8.0 (7.1-8.5)	24.6 (24.0-25.2)
50	80	8.42-8.71	814 (762-863)	8.0 (7.3-8.5)	24.6 (24.0-25.2)
100	70	8.30-8.68	774 (713-714)	8.0 (7.1-8.5)	24.6 (24.0-25.2)

Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )	Ammonia (mg/L)
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Control	150	
EW02	310	336

**TEST SUMMARY: SC-EW02-TX-201**  
***Pimephales promelas* 48-Hour Static Acute**

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Test protocol:	WCC SOP 410.2
Test organism:	<i>Pimephales promelas</i>
Source:	Woodward-Clyde Consultants
Age of test organism:	13 days
Test initiation:	6/14/95
Test termination:	6/16/95
Temperature:	20 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	500 mL plastic beaker
Test volume:	250 mL
Organisms/replicate:	10
Replicates/concentration:	2
Feeding regime:	none
Aeration during test:	none
Dilution Water:	Hard Reconstituted Synthetic
Test duration:	48 hours
Effect measured:	Mortality
Reference Toxicant Data:	
LC <sub>50</sub> (g/L NaCl):	5.26

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**TEST RESULTS: SC-EW02-TX-201**  
***Pimephales promelas* 48-Hour Static Acute**

LC<sub>50</sub> > 100%  
 Statistical analysis method: N/A

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )
Control	100	8.29-8.31	340 (327-353)	8.0 (7.4-8.5)	20.9 (20.8-21.0)	158	146
6.25	95	8.31-8.41	339 (332-346)	8.1 (7.5-8.6)	20.9 (20.8-21.0)		
12.5	100	8.33-8.41	311 (277-345)	8.1 (7.5-8.6)	20.9 (20.8-21.0)		
25	100	8.34-8.46	330 (315-345)	8.0 (7.4-8.5)	20.9 (20.8-21.0)		
50	100	8.34-8.58	330 (314-346)	8.1 (7.5-8.7)	20.9 (20.8-21.0)		
100	100	8.32-8.54	332 (316-347)	8.2 (7.5-8.8)	20.9 (20.8-21.0)	310	336

**SURFACE WATER SAMPLE ARRIVAL INFORMATION**

<b>Collection Date/Time:</b>	6/13/95 @ 0830
<b>Use Date/Time:</b>	6/14/95 @ 1415
<b>Method of Shipment:</b>	Overnight Courier
<b>Temperature (°C):</b>	1.5
<b>pH:</b>	8.32
<b>Ammonia (mg/L):</b>	0.85
<b>Conductivity (umhos/cm):</b>	781
<b>DO (mg/L):</b>	8.8
<b>Description:</b>	Clear

**TEST RESULTS: SC-EW02-TX-201**  
***Pimephales promelas* Chronic Renewal**

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Test protocol:	WCC SOP 510.1
Test organism:	<i>Pimephales promelas</i>
Source:	Environmental Consulting & Testing
Age of test organism:	<24 hours
Test initiation:	6/16/95 @ 1630
Test termination:	6/23/95 @ 1045
Temperature:	25 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	500 mL plastic beaker
Test volume:	250 mL
Organisms/replicate:	10
Replicates/concentration:	4
Feeding regime:	0.1 mL brine shrimp nauplii twice daily
Aeration during test:	none
Dilution Water:	Hard Reconstituted Synthetic
Test duration:	7 days
Effect measured:	Survival and growth
Toxicity test methods and procedures were followed in accordance with EPA 600/4-89/001	
Reference Toxicant Data:	
NOEC (g/L NaCl):	3

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**TEST RESULTS - SC-EW02-TX-201**  
***Pimephales promelas* Chronic Survival and Growth Test**

<b>Survival NOEC:</b>	100%
Statistical analysis method:	Fishers Exact
Normality test:	
Homogeneity of variance test:	
<b>Growth NOEC:</b>	100%
Statistical analysis method:	Dunnett's
Normality test:	Pass
Homogeneity of variance test:	Pass

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Control	100	7.86-8.50	346 (309-440)	7.8 (6.6-8.4)	24.7 (24.0-25.2)
6.25	95	7.98-8.52	375 (339-408)	7.6 (6.2-8.3)	24.7 (24.0-25.2)
12.5	90	7.98-8.52	390 (338-416)	7.6 (5.8-8.2)	24.7 (24.0-25.2)
25	92.5	8.04-8.57	447 (425-482)	7.5 (5.9-8.3)	24.7 (24.0-25.2)
50	97.5	8.10-8.66	557 (526-594)	7.6 (5.7-8.3)	24.7 (24.0-25.2)
100	87.5	8.22-8.67	753 (684-779)	7.6 (5.7-8.3)	24.7 (24.0-25.2)

	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )	Ammonia (mg/L)
Control	150		
EW02	310	336	0.85

**TEST SUMMARY: SC-EW03-TX-201**  
***Ceriodaphnia dubia* 48-Hour Static Acute**

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Test protocol:	WCC SOP 401.2
Test organism:	<i>Ceriodaphnia dubia</i>
Source:	WCC Culture Laboratory
Age of test organism:	<24 hours
Test initiation:	6/14/95
Test termination:	6/16/95
Temperature:	25 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	30 mL styrene
Test volume:	20 mL
Organisms/replicate:	5
Replicates/concentration:	4
Feeding regime:	none
Aeration during test:	none
Dilution Water:	Hard Reconstituted Synthetic
Test duration:	48 hours
Effect measured:	Mortality
Reference Toxicant Data:	
LC <sub>50</sub> (g/L NaCl):	1.51

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**TEST RESULTS: SC-EW03-TX-201**  
***Ceriodaphnia dubia* 48-Hour Static Acute**

LC<sub>50</sub>> 100%

Statistical analysis method: N/A

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )
Control	100	7.79-8.21	424 (419-429)	8.5 (8.4-8.6)	24.5 (24.0-25.0)	100	
6.25	95	8.02-8.34	382 (343-420)	8.5 (8.4-8.6)	24.5 (24.0-25.0)		
12.5	90	8.25-8.35	365 (323-407)	8.5 (8.4-8.6)	24.5 (24.0-25.0)		
25	100	8.32-8.45	452 (450-453)	8.5 (8.4-8.6)	24.5 (24.0-25.0)		
50	100	8.31-8.56	540 (518-561)	8.4 (8.3-8.5)	24.5 (24.0-25.0)		
100	95	8.26-8.55	699 (662-736)	8.5 (8.3-8.6)	24.5 (24.0-25.0)	110	326

**SURFACE WATER SAMPLE ARRIVAL INFORMATION**

<b>Collection Date/Time:</b>	6/13/95 @ 0730
<b>Use Date/Time:</b>	6/14/95 @ 1435
<b>Method of Shipment:</b>	Overnight Courier
<b>Temperature (°C):</b>	1.5
<b>pH:</b>	8.27
<b>Ammonia (mg/L):</b>	0.27
<b>Conductivity (umhos/cm):</b>	736
<b>DO (mg/L):</b>	8.6

**TEST SUMMARY: SC-EW03-TX-201**  
***Ceriodaphnia dubia* Chronic Renewal**

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Test protocol:	WCC SOP 501.1
Test organism:	<i>Ceriodaphnia dubia</i>
Source:	WCC Culture Laboratory
WCC Batch:	6/16/95 to 6/18/95
Age of test organism:	<24 hours
Test initiation:	6/16/95
Test termination:	6/23/95
Temperature:	25 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	30 mL styrene
Test volume:	15 mL
Organisms/replicate:	1
Replicates/concentration:	10
Feeding regime:	0.05 mL <i>Selenastrum</i> and 0.05 mL YTC daily
Aeration during test:	none
Dilution Water:	Hard Reconstituted Synthetic
Test duration:	7 days
Effect measured:	Survival and reproduction
Toxicity test methods and procedures were followed in accordance with EPA 600/4-89/001	
Reference Toxicant Data:	
NOEC (g/L NaCl):	0.75

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**TEST RESULTS: SC-EW03-TX-201**  
***Ceriodaphnia dubia* Chronic Survival and Reproduction Test**

**Survival NOEC:**

Statistical analysis method:	100%
Normality test:	Fishers Exact
Homogeneity of variance test:	

**Reproduction NOEC:**

Statistical analysis method:	50%
Normality test:	Dunnett's
Homogeneity of variance test:	Pass

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Control	100	7.87-8.64	369 (344-398)	8.1 (7.3-8.6)	24.7 (24.0-25.2)
6.25	100	7.88-8.51	372 (361-398)	8.1 (7.4-8.6)	24.7 (24.0-25.2)
12.5	90	7.97-8.48	399 (391-425)	8.1 (7.2-8.6)	24.7 (24.0-25.2)
25	80	8.08-8.54	453 (426-483)	8.1 (7.2-8.6)	24.7 (24.0-25.2)
50	90	8.27-8.58	560 (509-583)	8.1 (7.1-8.6)	24.7 (24.0-25.2)
100	90	8.24-8.67	736 (567-808)	8.1 (7.1-8.5)	24.7 (24.0-25.2)

Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )	Ammonia (mg/L)
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Control	150	
EW03	110	326

**TEST SUMMARY: SC-EW03-TX-201**  
***Pimephales promelas* 48-Hour Static Acute**

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Test protocol:	WCC SOP 410.2
Test organism:	<i>Pimephales promelas</i>
Source:	Woodward-Clyde Consultants
Age of test organism:	13 days
Test initiation:	6/14/95
Test termination:	6/16/95
Temperature:	20 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	500 mL plastic beaker
Test volume:	250 mL
Organisms/replicate:	10
Replicates/concentration:	2
Feeding regime:	none
Aeration during test:	none
Dilution Water:	Hard Reconstituted Synthetic
Test duration:	48 hours
Effect measured:	Mortality
Reference Toxicant Data:	
LC <sub>50</sub> (g/L NaCl):	5.26

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**TEST RESULTS: SC-EW03-TX-201**  
***Pimephales promelas* 48-Hour Static Acute**

LC<sub>50</sub> > 100%  
 Statistical analysis method: N/A

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )
Control	100	8.29-8.31	340 (327-353)	7.9 (7.4-8.4)	20.9 (20.8-21.0)	158	146
6.25	100	8.24-8.37	377 (376-377)	7.9 (7.3-8.5)	20.9 (20.8-21.0)		
12.5	100	8.28-8.39	392 (378-406)	7.9 (7.3-8.5)	20.9 (20.8-21.0)		
25	85	8.29-8.51	447 (426-467)	8 (7.5-8.4)	20.9 (20.8-21.0)		
50	100	8.29-8.57	552 (531-573)	8 (7.5-8.4)	20.9 (20.8-21.0)		
100	100	8.27-8.59	786 (744-798)	7.8 (7.2-8.4)	20.9 (20.8-21.0)	110	326

**SURFACE WATER SAMPLE ARRIVAL INFORMATION**

<b>Collection Date/Time:</b>	6/13/95 @ 0730
<b>Use Date/Time:</b>	6/14/95 @ 1450
<b>Method of Shipment:</b>	Overnight Courier
<b>Temperature (°C):</b>	1.5
<b>pH:</b>	8.27
<b>Ammonia (mg/L):</b>	0.27
<b>Conductivity (umhos/cm):</b>	736
<b>DO (mg/L):</b>	8.6
<b>Description:</b>	Clear

**TEST SUMMARY: SC-EW03-TX-201**  
***Pimephales promelas* Chronic Renewal**

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Test protocol:	WCC SOP 510.1
Test organism:	<i>Pimephales promelas</i>
Source:	Environmental Consulting & Testing
Age of test organism:	<24 hours
Test initiation:	6/16/95 @ 1620
Test termination:	6/23/95 @ 1500
Temperature:	25 +/- 1 °C
Light:	50 - 100 foot candles
Photoperiod:	16 hours light/8 hours dark
Test vessel:	500 mL plastic beaker
Test volume:	250 mL
Organisms/replicate:	10
Replicates/concentration:	4
Feeding regime:	0.1 mL brine shrimp nauplii twice daily
Aeration during test:	none
Dilution Water:	Hard Reconstituted Synthetic
Test duration:	7 days
Effect measured:	Survival and growth
Toxicity test methods and procedures were followed in accordance with EPA 600/4-89/001	
Reference Toxicant Data:	
NOEC (g/L NaCl):	3

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**TEST RESULTS: SC-EW03-TX-201**  
***Pimephales promelas* Chronic Survival and Growth Test**

<b>Survival NOEC:</b>	100%
Statistical analysis method:	Fishers Exact
Normality test:	
Homogeneity of variance test:	
<b>Growth NOEC:</b>	100%
Statistical analysis method:	Dunnetts
Normality test:	Chi-Square - Pass
Homogeneity of variance test:	Bartletts - Pass

Treatment (% Sample)	Survival (%)	pH	Conductivity (umhos/cm)	DO (mg/L)	Temperature (°C)
Control	100	7.86-8.50	346 (309-440)	7.8 (6.6-8.4)	24.7 (24.0-25.2)
6.25	100	8.00-8.60	376 (355-428)	7.6 (7.0-8.2)	24.7 (24.0-25.2)
12.5	100	7.99-8.57	393 (372-418)	7.7 (7.3-8.3)	24.7 (24.0-25.2)
25	97.5	8.05-8.57	447 (428-471)	7.7 (6.7-8.3)	24.7 (24.0-25.2)
50	100	8.15-8.62	556 (528-589)	7.7 (7.0-8.4)	24.7 (24.0-25.2)
100	100	8.21-8.65	748 (708-795)	7.7 (6.5-8.5)	24.7 (24.0-25.2)

	Hardness (mg/L CaCO <sub>3</sub> )	Alkalinity (mg/L CaCO <sub>3</sub> )	Ammonia (mg/L)
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Control	150		
EW03	110	326	0.27